The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees.

VOL. XLVIII. CHICAGO, ILLINOIS, MARCH 16, 1907. No. 11.

Original Articles

THE ORGANIZED MEDICAL PROFESSION AND SOME OF ITS ENEMIES.*

EDWARD JACKSON, M.D.
DENVER.

THE BASIS OF AN ORGANIZED PROFESSION.

The medical profession becomes organized, medical associations are formed, principally for these two purposes: to increase and diffuse medical knowledge and to elevate and maintain the ethical standards of the profession. Other important purposes may be served by our professional organizations. The guidance of the community in relation to matters of public health and hygiene is often, and properly, matter for consideration in medical societies; and special societies may be formed among the medical profession devoted to such particular purposes, as for the eradication of tuberculosis or trachoma. Again, medical societies sometimes act to protect the interests of the individual members of the profession; as by union for defense against suits for malpractice, or the relief of physicians who have been specially unfortunate, or their families. But this work, too, is taken up after the profession has been organized. Such objects do not primarily bring about professional organization.

1. Maintenance of an Ethical Standard.—The vital purpose that brings about organization, that sustains and perfects it, is the determination to make the profession more efficient and valuable to the community, by the improvement and diffusion of knowledge among its members, and the maintenance of an ethical standard. A little consideration should show why this is so. The profession exists to render a certain service to the community. In so far as it fulfils this service it is worthy of perpetuation and support. If it should fail to render valuable service it ought to go out of existence and ultimately would do so. Its value to the community, like the value of any other profession, depends on the fidelity with which its members serve the interests of their clients. Between a man and his medical adviser the relation is this: the patient agrees, explicitly or implicitly, to pay the physician his fee; the physician agrees to employ all his knowledge and skill for the benefit of the patient. There can be no matching of knowledge of the market, as between salesman and buyer. There can be no use of conscious power, on the one hand, to drive an extortionate bargain with dire need, on the other. To apply the rules of conduct recognized as proper in ordinary commercial transactions to the relation of physician and patient is to destroy that relation. Hence, the peculiar need of professional organization to define, maintain and enforce a standard of professional ethics.

2. Diffusion of Medical Knowledge.—Then medical organizations attempt to improve, extend and diffuse professional knowledge. It is the possession of certain knowledge and technical skill that justifies the recognition of a man or woman as entitled to membership in the medical profession. Without the possession of such knowledge and skill, no well-informed person would for an instant regard him or her as a physician or surgeon. Let us consider for an instant how this mass of professional knowledge and technical acquirement has come into existence. It has been wholly through the communication of the new fact or method discovered by one member of the profession to his fellows. Take all the original discoveries attributable to any one member of the medical profession, the most able, the most indefatigable, the most favorably situated, through the longest working life. How utterly insignificant would these be as a basis for the practice of medicine; as compared with what each of us has learned from his predecessors and contemporaries in the profession. Without the diffusion of medical knowledge no medical profession would or could exist.

Consider how our appreciation of any medical truth is arrived at. Take the history of tuberculin. Announced to the laity by one of the most acute observers of the age, after years of study and careful laboratory experiments, Koch's discovery, for a time, seemed to serve only to raise false hopes, to increase suffering, to destroy life, to bring contempt on scientific medicine. But announced to the profession, placed in the hands of a host of interested workers, there have already emerged certain facts that have made tuberculin a real benefit; and give promise, through the general sifting and trying process to which the whole profession subjects the observations that are brought before it, of benefits to match our earlier hopes. With an organized medical profession we possess an authoritative tribunal capable in the end of fixing the value of each proposed measure that is frankly brought before it.

ENEMIES OF THE PROFESSION AND THE GROUNDS OF WARFARE.

Our organized profession rests on these two things: recognition of the supremacy of the interests of the patient and absolute frankness and honesty in statements of scientific fact. The enemies of the organized medical profession, its essential enemies, those whose opposition to it is radical and vital, are those who would place other interests on a par with those of our patients; or who would practice or permit secrecy or untruth to be mixed inextricably with established scientific facts. Between the medical profession and all interests or individuals who place themselves in the attitude of opposition to our vital principles, there must always be warfare; a struggle that can not end until secrecy and dishonesty as to therapeutics, until willingness to sacrifice the interests of the

* Read before the Medical Society of the City and County of Denver, Oct. 2, 1906.

patient to other interests are swept away; or the medical profession itself is annihilated.

Let us not underestimate the importance, the severity or the duration of this warfare. On the one side the medical profession springs from the needs and the best impulses of humanity. On the other side the opposition to it draws its vitality from selfishness, deeply rooted and universal as the life of our race. The struggle commenced before we were born; it will go on when we are dead. Our duty is to see that we understand the present phase of it, as well as we can, and give what little influence we have to the support of the right.

PROPRIETARY MEDICINES, ETHICAL AND UNETHICAL.

The present phase of the subject deals with the question of proprietary medicines. "Patent medicines" is the popular term for the class, but those to which the term "patent" strictly applies raise a relatively unimportant side issue. The "patent" medicine may represent interests to some extent opposed to those of our patients, but a patent is only granted for a limited time and based on definite published statements. If such statements are not true, their falsity can readily be demonstrated.

In this country, at least, the important issue is with regard to preparations sold under a registered trade-mark. We can have preparations sold under a copyrighted trademark that are strictly ethical. But such preparations must conform to the following requirements: their composition, or exact method of manufacture, and their physiologic and therapeutic action, must be generally known. They must be sold under their ordinary pharmaceutical names which any person is privileged to use, so that all may understand what the medicine purports to be. The trade-mark or copyrighted portion of the name must only indicate the responsible maker, thus becoming a guarantee of purity and quality.

Squibb's ether is a type of such a preparation. Ether is a drug, the composition, physiologic action, uses and dangers of which are well known. False claims for such a drug would be promptly challenged and could not seriously mislead any one who took care to inform himself on the subject. If the manufacturers of a particular brand of ether can produce one of greater purity, more free from irritants, they deserve the reward of superior skill; while the profession and the public can profit by the guarantee of a reliable name. The same may be true of a particular brand of diphtheria antitoxin, if proven to be more perfectly aseptic or more efficient than that produced by a rival manufacturer.

But a name can be copyrighted without any definite statements as to the chemical composition or method of preparation of the substance it represents. When what is claimed to be a new chemical compound is put forth, with claims of therapeutic value, based not on the general experience of the profession, but on the alleged results attained by some anonymous or unknown experimenter, generally in the pay of the proprietors of the copyright, the act violates the fundamental principles of organized medicine. It is an act of aggressive warfare on the part of an enemy of medical science, and as such must be regarded and met by every loyal member of our profession.

Even though the composition of a new preparation be frankly stated, the copyrighting of the name by which it will be commonly known should be regarded with suspicion. The physician who prescribes a substance by its copyrighted name places himself at the mercy of the proprietors of that name. He must have full faith in their honesty and intention to put forth a valuable drug, the use of which shall be wholly subject to the discretion of physicians; but the copyrighted name is an asset that may pass, as it often has done, to the hands of those who may vary the composition of the preparation, or the manner of placing it before the public. Even aside from secrecy or misleading statements, when the physician prescribes acetanilid under the name antikamnia, ammonol or phenalgin, what possible benefit is the use of such name to the patient, who pays from 100 to 500 per cent. more for the drug, or to the general public, or to any one except the proprietors of these copyrighted names, and those with whom they divide their profits?

IGNORANCE AND TREASON IN THE PROFESSION.

In the past, even in high places, ignorance and indifference to this matter have been so common, the evil has grown so gradually to its present gigantic proportions, that individual members of our profession can not be greatly blamed for some mistakes in this direction. But now that the issue has been raised by the American Medical Association; now that even the better lay magazines and newspapers have awakened to the enormity of the crime against the public of secret proprietary medicines, all members of our profession and all medical organizations are called on to take a positive stand with reference to this subject. There is need to arouse the professional conscience and also to inform the professional intelligence with regard to this subject.

The warning of Samuel Hopkins Adams[1] in his address before the Medical and Chirurgical Faculty of Maryland is too true:

> You have not, as a profession, an intelligent idea of the forces which you are fighting. . . . You are fighting a very keen and powerful enemy in the "patent medicine" man, or rather you are just beginning to fight him, for you have let him take the aggressive thus far. There is little about your profession that he does not know. When he misrepresents you he does it shrewdly. There is little about his profession that you do know.

In the present confused situation the danger is not from open avowed enemies, but from ignorance and treason in our own ranks. For ignorance there will soon be little excuse. The facts that have been published by THE JOURNAL of the American Medical Association and some of the journals of our state medical societies are within the reach of all who have a proper interest in the subject. For treason we may have to resort to sharper remedies than have yet seemed necessary. Let us remember that the Constitution of the United States defines treason as consisting "in levying war against them, or in adhering to their enemies, giving them aid and comfort." No narrower definition could possibly be sufficient.

Let us clear up this issue as much as we can. Our enemies are the vendors of unethical proprietary medicines, secret or put forward with extravagant claims. These men are engaged in getting out of the public all the money they can without coming in serious collision with the criminal law. They have no professional traditions; they have no special code of morality; they are engaged in a business in which the general morality taught in churches and schools is disregarded. They have no interest in the establishment of scientific truth. The proprietary medicine maker would not be satisfied with a true estimate of the action of the preparation he

1. Maryland Med. Jour., February, 1906.

puts before the public were it ten times more powerful and generally useful than any medicine yet known. The most nearly decent proprietor of such a preparation is spending a large part of his time and thought in exaggerating the virtues of his drug and minimizing its evil effects. His aim is to build up an impression, manufactured out of hope and based on credulity, which will cause people to buy his wares.

HOW THE PHYSICIAN IS MADE A CATSPAW.

In accomplishing this aim he seeks the assistance of the medical profession, he studies the psychology of the medical man and employs such agencies as will best accomplish the object. He sows free samples broadcast, calculating that one prescription from one physician will pay all the expenses of sampling ten. He pays impecunious or renegade members of the profession for what purport to be scientific articles, making favorable mention of his drug. But especially he buys the advertising pages of the medical journals, with the good-will of the editorial management thrown in, to keep his blatant unsupported claims and skilfully worded suggestions forever before the eyes of our profession.

Thus are a multiplicity of worthless preparations, of false statements, and of distortions of facts brought to hinder the progress of scientific medicine even in the mind of the physician, and weaken his power to combat disease. Thus do our enemies damage the healing art and steal the confidence the community reposes in the physician and use it as an important aid in the creation of the false impression, through which they hope to amass fortunes—the very livery of heaven to serve the devil.

The time has come when the treason in our own ranks, which makes it possible and easy to use the reputation of medical men and medical journals against our profession and the interests of our patients, should be recognized and characterized in its true light. The proprietary medicine manufacturers fight the medical profession in every state in the Union, with lobbyists in the hall of every legislature, and with clauses like these inserted in their contracts with the newspapers:

1. It is agreed in case any law or laws are enacted, either state or national, harmful to the interests of the ——— Manufacturing Company, that this contract may be canceled by them from date of such enactment, and the insertions paid for *pro rata* with the contract price.

2. It is agreed that the ——— Manufacturing Company may cancel this contract *pro rata* in case advertisements are published in this paper in which their products are offered, with a view to substitution or other harmful motive; *also, in case any matter otherwise detrimental to the ——— Manufacturing Company's interests is permitted to appear in the reading columns or elsewhere in this paper.*

On the other hand, these same manufacturers subsidize some of the largest so-called "independent" medical journals of the country to induce the more poorly trained, ignorant, lazy or careless portion of the medical profession to prescribe these nostrums; while the more venal lend their names and talents to give such use of these nostrums an air of respectability.

Charity may well be exercised toward the shortcomings of individual physicians; but there is no excuse for medical organizations in any way favoring or condoning the efforts made to confuse medical fact with falsehood and bring about the disintegration of an organized profession. Of course, the effort is persistently made to befog the issue. There has been a great deal of hypocritical rejoicing in certain medical journals over the declaration of the American Medical Association at the Boston meeting that it was not opposed to "independent medical journals." No one ever honestly supposed that it was. The declaration simply met the false issue raised by those who give "aid and comfort" to the enemies of the profession, when there was evidence of a disposition to oppose the treason which manages so-called "independent medical journals" in the interests of nostrum makers.

There is need on all occasions and on all sides for clear thinking and plain speaking in regard to this matter. Let it be understood that it is treason to the traditions and ideals of our profession, treason to scientific medicine and to medical organization, to give aid and comfort to our enemies by prescribing, recommending, associating one's name with, or advertising any proprietary remedy, which is secret in composition or method of manufacture, or for which extravagant, misleading or untruthful claims are made.

THE PLACE OF PATHOLOGY IN THE UNIVERSITY.*

EDWIN O. JORDAN, PH.D.
CHICAGO.

It is a well-known historical fact that the origin of the natural sciences and in particular that of the biologic sciences is closely connected with the study of medicine. Physics, chemistry, zoology and botany were not only first cultivated mainly by physicians and students of medicine, but their special problems were also in the beginning largely the outgrowths of questions that plagued the minds of those who practiced the art of healing. As time went on these sciences did not remain exclusively attached to medicine and the medical schools, but became associated with other branches of learning. The history of education shows that universities, throughout their development, have been almost continuously enriched with new subjects for study and scientific investigation derived from the activity of medical thought and practice. Singularly enough, the universities, and more strangely still, the first born of the natural sciences, have not always shown themselves hospitable to the biologic studies that have been developed more recently in medical surroundings. Zoology and botany hold conspicuous and time honored places as branches of study worthy of the attention of the general university student, while an unmistakable, although it must be confessed feeble protest is being made even to-day in some quarters against the admission of scientific anatomy and even physiology into the same category. In one instance, the classification of the biologic sciences into medical and non-medical has had the effect that the buildings that house comparative anatomy, zoology, botany, and chemistry are separated by a considerable distance and by other barriers from the new and magnificent facilities for studying human anatomy, physiology and pathology. Apart from the essential identity of many of the biologic problems, and putting on one side the question of the lessening of the opportunities for mutual intercourse among workers in related fields, there is here involved the question of the exclusion of the general university student from participation in some of the most stimulating and momentous scientific movements of the day.

Medicine on its side also is the loser by any divorcement from the university. On more than one occasion in the last few years zoölogic and chemical discoveries

* President's Address, Chicago Pathological Society, Oct. 8, 1906

and theories have influenced fundamentally the trend of medical research. Who will undertake to say that the origin and growth of cancerous tissue is not essentially an embryologic or cytologic problem, and may not eventually be explained by the zoölogist rather than by the professional pathologist? Any separation of the biologic sciences into medical and non-medical groups is not only artificial, but is open to the danger that either group may develop asymmetrically, imperfectly or abnormally when the restraining or stimulating influence of the neighboring science is withdrawn.

Pathology is one of the biologic sciences that has most recently swum into the ken of many professional educators, and the question will soon arise, if it has not already arisen, as to what justification exists for the introduction of such a subject into a university. At present the universities in the United States that foster a department of pathology or one of bacteriology and hygiene on the same academic footing with a department of Latin or of Sanskrit may almost be counted on the fingers of one hand. Out of forty of the leading colleges and universities only eight, according to statements in recent catalogs, give to their academic students an opportunity for studying bacteriology or pathology.

It may be said in the first place that any one acquainted with the subject matter of pathology understands that since it deals largely with physiologic, anatomic, and chemical data its pursuit must suppose sufficient and correlated facilities for the acquisition of the more fundamental branches. It would be a mistake to assume, however, that pathology is merely a form of the technical application of these sciences. Investigation into the nature and causes of disease carries with it as definite and as independent a body of problems as does the meaning of structure or the interpretation of normal function.

The advanced character of much of the work in pathology as determined by the extent of preliminary training necessary for effective approach, and the special facilities essential for many kinds of pathologic work are likely for some time to come to limit the introduction of pathology into universities and at least to keep it in the category of elective rather than required subjects. This is not the time or the assembly for a full discussion of the respective provinces of required or elective studies, but it is natural that the courses in pathology in their broader aspects should be elective for the non-professional student, although it may well be questioned whether some of the fundamental principles of bacteriology and hygiene are not deserving of consideration side by side with other courses in natural science of no greater educational value and of decidedly less practical significance for the average human life.

Taine says that the first great English utilitarian, Francis Bacon, at the age of 16, expressed dissatisfaction with Aristotle's philosophy, not that he thought meanly of the author, whom, on the contrary, he calls a great genius, but because Aristotle's system seemed to him of no practical utility, incapable of producing works which might promote the well-being of men. However steadfastly it is held that the true university should stand as a bulwark against the ever aggressive forces of materialism and crude self-interest, it is also possible to maintain that the large purpose of promoting the well-being of man is a vital part of its functions. Whatever may be said about the idealistic value of pathology there can be no question as to its importance in its broader utilitarian or humanitarian aspects. As a subject of scientific research pathology does not need to defend its place in the university. It both strives to extend the boundaries of knowledge and aims to promote individual and general happiness and welfare.

One of the points on which issue is joined is more subtle, or, if you please, more academic than this. Should professional studies which are necessary for the special students of law, divinity, medicine, or engineering, be allowed to count toward a college degree? Are they, in other words, to rank on the same footing as courses adapted for training students to proficiency in Latin, mathematics, or biology? The question of educational values and the relative merits of different branches of knowledge lies in the main outside the scope of this paper. I can not, however, help expressing my disagreement with the advocate of specialism who holds that special aptitude and concentration are the main things to be considered, and that every student should be allowed to work out his own salvation with his own talent in his own way. My observation indicates that few if any students are able to pick their way to advantage through the maze of studies in a modern university. Trivial, even mischievous reasons are allowed to sway the choice of courses and the result is in too many instances a jumble of brilliant misinformation. The principle of election of studies, in itself sound and worthy of extension, has been misapplied and misinterpreted until some have come to believe that the subject studied is of little moment, provided that a student feels or fancies that he feels a desire for it. From this view I cordially dissent. If the history and experience of the human race count for anything Choctaw is not so educationally valuable as Latin, or bookkeeping as plane geometry. A limit should be placed somewhere to the possibilities of election on the part of the college student. Subjects that may well find a place in a university devoted to the advancement of knowledge need not forthwith be made accessible to the whimsical choice of undergraduates. One of the notorious and still growing evils of the situation is the multiplication of what I may call intermediate courses which stand between the fundamental courses and the seminars or conferences intended for the guidance or promotion of research. Many of these courses are simply a concession to the feeling for symmetry and completeness, and their existence among college electives is educationally deplorable. Mr. Charles Francis Adams contends that a college education should be "purely a training of the mental powers—the suppling and development of the intellectual muscles—the proportioning of the faculties." He follows this with a definition of the educated man which in its blending of the older traditions with a very modern spirit is worth quoting. "An educated man is, I take it, one in whom the imaginative faculties, the reasoning faculties, and the observing faculties have all been properly and adequately developed—developed to such a degree that each becomes a usable tool for accomplishing the work in hand to do."

I believe that it should be the work of the colleges to turn out men so trained and equipped, and that to effect this end a much more scientific application of the principle of the election of studies is needed than has yet been made. This carries with it, too, a task which college authorities almost invariably shirk, a study of the individual student, of his needs and deficiencies as well as of his aptitudes and passing inclinations. A smaller number of courses announced and given, an adoption of

the principle of election within groups of studies and more attention to the individual as an individual are, it seems to me, some of the immediate objects to be aimed at in American college and university life.

How, now, in view of these considerations, should we attempt to adjust the demands of professional education to the best interests of the undergraduate student? The question really resolves itself into determining what courses of a professional nature best serve the purposes of a true education, bearing in mind that the end in view is not the amassing of information, but the symmetrical training of the faculties. Only those professional courses that distinctly serve this end should be thrown open for undergraduate selection. From purely technical and informational courses they should be debarred until they enter definitely on their professional career. It may even be questioned whether in strictly professional work the informational course does not play a far larger part than it should. Mr. Adams, in the address above quoted, says: "The reasoning man, devoid of imagination and unable to observe, becomes, whether in religion, in politics, or in philosophy, notoriously a pitfall. On the other hand, the observing man finds himself at fault unless he can imagine and reason. No man, moreover, is fit to be called educated unless in him each group of faculties has been suppled and trained." Every student of science, and especially every student and teacher of medicine may well consider whether, if he accept this view, many courses now recommended to or required of the prospective practitioner, investigator, or teacher could not readily and advantageously be dispensed with.

In a university, therefore, the courses in pathology ought to stand on their own educational merits and be weighed like courses in Hebrew or on the political constitution of the Romans, not so much for their informational content as for their ability to train the powers of the mind. Like other courses in natural sciences the fundamental or elementary courses in pathology and bacteriology possess, in my opinion, a peculiar and unique value not possessed by courses in linguistics, history, or economics. Much is said nowadays concerning the introduction of the scientific method into these subjects; it might even be semi-seriously urged that science is not needed by the student of philology and economics since these branches have become infected with the scientific method. One of my colleagues has recently said: "There is certainly no fundamental distinction between the researches of the historian, the philologist, the social statistician, and those of the biologist, the geologist, or even the physicist and chemist in point of method." With this view I can't agree.

It must not be forgotten that while certain features of the scientific method are applicable to subjects like history and philology, others are not and in the nature of the case never can be. The student of history can rarely if ever depend on his own first-hand observation, but must rely more largely than the student of science on facts recorded by observers of doubtful capacity or even questionable veracity. The original documents, moreover, that constitute the raw material of history, are often so tinged with human passion as to be valueless as records of observed fact. Furthermore, the opportunities for experiment, of which science makes so large a use, are practically altogether wanting. When complex economic phenomena are accurately observed and their nature correctly interpreted, it may be possible to frame plausible generalizations, but the verification of these generalizations is another matter. There are different views as to whether the governmental ownership of railways in the United States is practicable or desirable, but none of these theories can be verified in a class-room, nor can we make on a large scale a series of experiments, first in one direction, then in another, while all other conditions remain the same.

I am compelled to believe, therefore, that the scientific method in its entirety and cogency is best exemplified by courses in natural science. The advantages, such as they are, of personal observation and experiment followed by generalization and verification, may be presented by the fundamental courses in pathology and bacteriology, as well as by courses in other natural sciences. In fact, something might be said in advocacy of bacteriologic method as calculated to enforce in a peculiarly direct way the necessity of uniformity of condition in experimental work, but this is not essential to the present argument. Granting that the elementary courses in pathology, therefore, stand on the same level, educationally speaking, as the other branches of natural science, it must be added that in common with the rest of the biologic sciences they demand some preliminary scientific training for their successful approach.

Although I am heartily of the opinion that training of the imagination, the reason, and the power of observation should be the main object of a college course, there is no reason why a steady prosecution of this object should prevent one from gathering flowers by the wayside. It seems possible to attain the end and at the same time to acquire information of a kind most likely to be useful to the average human being. Here lies the opportunity for the group elective system which shall give some play to aptitude and inclination at the same time that every course is made to tell in the direction of mental efficiency and control. The evaluation of the subject matter of a science is perhaps more a question of personal temperament than any yet touched on, and I do not wish here to advance the claim that to any discerning intellect pathology stands supreme among the sciences. I would simply point out first that the known and elementary facts regarding the nature and causes of disease are of importance and usually of interest to the individual, and second, that the diffusion of at least an elementary knowledge of these facts is essential to the well-being of every nation and community.

THE ADJUVANT ACTION OF QUININ HYDROCHLORATE IN INFECTIONS BY THE BACILLUS OF TETANUS.

EUGENE F. McCAMPBELL, S.B.
Instructor in Bacteriology, Ohio State University.
COLUMBUS, OHIO.

Not long since my attention was directed to a case of tetanus of a very rapid and severe type which ended fatally. It appeared to be a case of so-called idiopathic tetanus as no history of trauma of any kind was given. On careful examination it was found that the patient had been threatened with an attack of malaria not long before the attack of tetanus and had been given a hypodermic injection of the hydrochlorate of quinin by the physician in charge. The attack was evidently aborted as no other symptoms resulted until those of tetanus developed. This incident called to mind some very interesting work reported by Prof. M. E. Vincent, which I had tried to corroborate some time before. In

the hope of being more successful in the work of corroboration than I was in the first series of experiments, which were entirely negative, and in the light of the case of tetanus above mentioned, I undertook a second series of experiments. As the question is not without practical interest to the physicians, I report results of two series of careful experiments following in detail the work of Professor Vincent.

Professor Vincent's[1] report calls attention to the many cases of tetanus which have been reported as following the subcutaneous injection of quinin under supposedly aseptic precautions and gives the results of his experiments along these lines. He states that the many cases on record can not be explained on the ground of poor surgical technic, such as the improper cleaning of the skin at the time of the hypodermic injection or to the uncleanliness of the syringe or needle, nor to the contamination of the solution of quinin. He states also that quinin injected subcutaneously in experimental animals at the same time or following the injection of the spores of tetanus favors the development of the disease. He thinks that the solutions of quinin show a marked favoring action with the spores of the tetanus bacilli and that the disease can result when hypodermic injections are made aseptically if the spores are present in the body. This action is both local and general, he says, and results whether the quinin is injected at the same point as the spores or at points distant. It also results if the injections of quinin are made synchronous with, or at different times from that of the injection of the tetanus spores. The bacilli develop not only at the point of inoculation but are encountered, Vincent says, in the liver, kidneys, spleen, ovaries and bone marrow.[2] He claims also that when tetanus spores are injected on one side and quinin on the other, the locus of the infection is on the side on which the quinin is injected; the bacilli having passed across the body to this point.

In my experiments I found that virulent tetanus spores preserved their vitality from 10 to 30 days in solutions of the five official salts of quinin, namely, the sulphate, bisulphate, hydrobromate, hydrochlorate and the salicylate.[3] I found the hydrochlorate of quinin slightly more antiseptic than the other salts, but found also that it was not capable of destroying the spores of tetanus. In concentrated solutions, however, it was capable of destroying the bacilli of tetanus.

I then set about to determine the lethal dose of hydrochlorate of quinin for the experimental animals. I found in a series of experiments that the amount varies from 1/3,500 to 1/4,000 the weight of the guinea-pig and from 1/4,500 to 1/5,000 the weight of the rabbit. These figures varied with the age of the animals, young animals being more susceptible than older ones.

In my experimental work I found it difficult to get a good spore-bearing culture of the bacillus of tetanus, but finally secured a virulent spore producer on which I could depend. This culture would kill a normal guinea pig in from two to three days. In the experimental work on the action of quinin I used a toxin-free culture of tetanus spores. After a culture had been incubated for some time and began to form spores in large numbers it was heated to 80 C. for three hours to destroy the toxin and used within a short time after heating.

1. "Tetanos et Quinine," Annales de l'Institut Pasteur, 1904, xviii, p. 728.

2. The spores have been demonstrated in the fluids of the body in tetanus as it usually occurs by several observers recently. They have never been demonstrated to be capable of multiplying, however, at other points than the locus of the initial lesion.

3. United States Pharmacopeia, 1900.

THE LOCAL INFLUENCE OF QUININ.

From .1 to .2 cc. of a heated culture of live tetanus spores together with a sterile 5 per cent. solution of the hydrochlorate of quinin corresponding to 1/5,000 of the body weight was injected into the flank of a guinea pig by means of a sterile hypodermic syringe. Control animals of approximately the same age and weight were injected, one with an equal amount of the tetanus culture, the other with an equal amount of the solution of hydrochlorate of quinin. The animals inoculated with the tetanus spores and quinin and those inoculated with the quinin alone showed a noticeable reaction in a few minutes but seemed almost normal in a short time. This reaction, which showed itself as an increase in respiratory movements and paralysis of the inoculated limb, was undoubtedly due to the hydrochlorate of quinin.

In 50 per cent. of the animals inoculated with tetanus spores alone the disease developed in from five to seven days. In these animals the wound had ulcerated and cultures made from the locus of inoculation showed a mixed infection. In the other 50 per cent. the bacteria could not be demonstrated at the point of injection and without doubt the reason for this was that the spores had undergone phagocytosis by the leucocytes or tissue cells or perhaps had passed to other portions of the body and had undergone a similar process. In several cases sterile pus was demonstrated. These were the results of a series of 10 experiments on guinea pigs.

The amount of the solution of hydrochlorate was increased to 1/4,500 of the body weight and still no tetanus developed in those animals inoculated with quinin and tetanus spores provided there was no secondary infection. Two animals which had been inoculated with hydrochlorate of quinin and tetanus spores died of tetanus but a secondary infection was easily demonstrated and the animals did not die in any extraordinary short time. Vincent states that the animals inoculated with quinin and tetanus spores in the majority of his experiments developed symptoms of tetanus in three days and died in 24 to 48 hours after. Some animals, one in five, he says, showed a high susceptibility and died in from 18 to 24 hours after inoculation, with convulsions and violent trembling. The death in these cases was doubtless due almost entirely to the toxic action of the quinin hydrochlorate and not to the tetanus infection. Solutions of quinin contaminated by other alkaloids give more pronounced toxic effects than pure quinin. It is interesting to note that much of the quinin on the market contains other alkaloids.

In experimenting to determine the lethal dose of the quinin I found that the animals usually died in convulsions and that these convulsions simulated those produced by the alkaloid strychnin or by the bacillus of tetanus. Vincent states that in the above-mentioned cases the bacilli were easily demonstrated at the point of inoculation and also in the spleen, liver, kidney, etc. I was not able to demonstrate this point.

I believe that the hydrochlorate of quinin possesses both an antiseptic and weak disinfecting action on the bacilli of tetanus. This is especially true of concentrated solutions of this salt. It is interesting to note that all fermentation and all putrefaction is stopped by the addition of this chlorin salt of quinin. This action is probably due to the acid properties which it possesses. Although chemically neutral it possesses acid properties,

as do some of the other salts. This is shown by the way they attach certain metals.

In a little over an hour after injecting hydrochlorate of quinin and tetanus spores into the abdomen of a guinea-pig symptoms simulating those of tetanus were produced. It is interesting to note, however, that those animals injected with hydrochlorate of quinin also showed the same symptoms. The animals injected with tetanus spores alone did not die, the organisms probably having been destroyed by phagocytosis. The tetanic symptoms were evidently not due to tetanus bacilli alone but principally to the toxic action of the quinin.

Taking for granted from previous experiments that hydrochlorate of quinin favors the development of tetanus, Vincent experimented to find out whether tetanus would result after the injection of the spores at one time and the injection of the solution of quinin some time after. He concludes that the tetanic infection can be awakened by such procedure if the quinin is injected as long as eight days after the injection of the spores. I tried the experiment without result as was expected from my previous observations.

In his report Vincent discusses the character of the ulcer which is found at the point of inoculation. He says that it is under the skin, slow to heal and covered by a yellowish-gray excretion. In cases in which a mixed infection occurred after large injections of quinin I found that the ulcers were in the main similar. The characteristic appearance is, perhaps, due in part to the coagulation of the proteids in the tissue by the hydrochlorate of quinin. This power of coagulation is easily demonstrated on normal rabbit or guinea pig serum *in vitro* and such coagulation goes on in the tissues of the body to a limited extent. The leucoytes are claimed by some authors to be paralyzed by the action of the salts of quinin. This point will be mentioned later.

THE GENERAL INFLUENCE OF QUININ.

Under this head Vincent discusses the general action of the hydrochlorate of quinin and claims that it causes an infection of tetanus when injected at points distant from the point of injection of the tetanus spores. That is, if a guinea pig is inoculated under the skin of one flank with a culture of tetanus spores and under the skin of the opposite flank a solution of hydrochlorate of quinin is injected at the same time or a few days later, within 24 hours tetanus occurs followed by rapid death. Furthermore, he states that the focus of the tetanic infection is not at the point where the spores have been injected but that they have passed across the body to the other side and located themselves at the point where the solution of quinin was injected. There is no ulcer, he states, at the point of inoculation of the spores and there are no bacilli, except, perhaps, a few in the broken down tissue. According to Vincent, at the point where the quinin was injected the bacilli can be obtained in pure culture. I found that after the aseptic injection of tetanus spores on one side of the guinea pigs and the aseptic injection of a sterile solution of hydrochlorate of quinin on the other, the spores disappear at the point of inoculation, as Vincent says, but I was not able to demonstrate them at the locus of quinin injection.

Attention is called to the witherings of the extremities in some of Vincent's guinea pigs. This is explained on the basis of the continuous multiplication of the bacilli. It is possible to get this same atrophy in the extremities of guinea pigs by the injection of hydrochlorate of quinin in large doses when no tetanus spores are present.

Experiments were made to show, if possible, whether injections of hydrochlorate of quinin under skin and tetanus spores by the alimentary tract and *vice versa* would cause an infection. These results were entirely negative.

Next I made observations to determine the action of hydrochlorate of quinin on the leucocytes. I found, like Vincent, that the quinin solution possesses some corrosive action on the leucocytes when applied to them in a fresh condition. A slight paralyzing effect is shown which is, obviously, less marked with dilute solutions. Some of the other salts, particularly the hydrobromate, have a similar effect in concentrated solutions. I was not able to demonstrate a marked hyperleucocytosis in the experimental animals, although there was a slight increase in the number of leucocytes. The action of quinin on the leucocytes, etc., has been investigated by several men, most notably by Binz.

SUMMARY AND CONCLUSIONS.

1. Solutions of the official salts of quinin have a feebly antiseptic action on the spores of tetanus, the hydrochlorate being the most antiseptic. Obviously the antiseptic action depends on the concentration of the solution. Saturated solutions do not disinfect.

2. The lethal dose of neutral hydrochlorate of quinin is from 1/3,500 to 1/4,000 the weight of the guinea pig and from 1/4,500 to 1/5,000 the weight of the rabbit. The dose varies with the age of the animal, young animals being more susceptible than older ones.

3. Hydrochlorate of quinin has the power of causing a paralysis which persists for various lengths of time in the experimental animals. This action is due, I think, to its coagulating action on the protoplasm of the peripheral nerves. Atrophy of the extremities results after large doses.

4. In cases of tetanus in experimental animals, which have been injected with hydrochlorate of quinin, the disease resulted only in those cases in which there was a mixed infection. The quinin may have acted indirectly since its corrosive action at the point of inoculation would make secondary infection more liable. It is possible that the quinin may act as an additional irritant to the nervous system in cases of tetanus or may bring about such changes in the protoplasm of the nerve cells and fibers that they are more easily acted on by the tetanus toxin than normally. In these particulars, however, any mild corrosive substance would serve the same purpose.

5. In cases in which tetanus does not result after injections and there is no secondary infection, the spores have evidently undergone phagocytosis by the leucocytes or tissue cells as none of them are ever found.

6. Hydrochlorate of quinin has not the power of favoring an infection of tetanus except in the indirect manner mentioned in paragraph 4. It has not the power of awakening an infection when injected at the same time or at other times than that at which the tetanus spores are injected.

7. Hydrochlorate of quinin produces a slight leucocytosis and slight paralyzing effect on the leucocytes. Should this paralysis be so extensive as to involve the majority of the leucocytes in the body, it is possible that the spores of tetanus might develop unhindered as is the case when lactic acid is injected. If quinin of such strength was injected in sufficient amounts, however, to

act on the majority of the leucocytes the toxic effects of the quinin would be evident at once and death of the animal would probably result.

I think, without doubt, that the majority of cases in which tetanus has resulted after hypodermic injections of quinin can be traced to some fault in the surgical technic or to the contamination of the solution of quinin. Quinin possesses a corrosive action and the necrosis of tissue resulting in some cases would undoubtedly favor an infection by the bacillus of tetanus as well as by other bacteria. As to the statement that the transference of the spores of tetanus takes place from point to point according to where the quinin is injected, I do not think that there is at present sufficient proof. Nor do I think it possible for the healthy live spores of tetanus to be present in the body and to develop a severe and fatal infection on the advent of an injection of hydrochlorate of quinin.

In THE JOURNAL of the American Medical Association, Dec. 9, 1905, I published an inquiry asking if any practitioner had ever seen a case of tetanus resulting from a hypodermic of quinin. A few answers were received from various physicians but no cases reported were exactly in point. In one case there was good evidence of poor surgical technic in the sterilization of the syringe and the skin. In another case tetanus is reported as following the injection of aromatic sulphuric acid and quinin sulphate. No cases were reported in which the hydrochlorate was used and tetanus resulted except the one referred to above as giving evidence of poor technic and in this case there was evidence of several other slight abrasions on the patient which might have served as avenues of infection.

Evidently in this country tetanus does not result after hypodermic injections of quinin, although it is possible it may in other countries.

CEREBRAL SYPHILIS IN CHILDHOOD.

ARTHUR WILLARD FAIRBANKS, M.D.
Assistant Physician, Department for Nervous Diseases, Children's Hospital.
BOSTON.

(*Concluded from page 866.*)

CASE 31.—Boy, 9 months. Father syphilitic.[26]

Fever and general convulsions repeated at interval of few days, with blindness between attacks. Great restlessness. In 2 months complete blindness from beginning optic atrophy. Specific treatment was followed in few weeks by returning sight and in 11 months complete cure.

CASE 32.—Girl 12 years. Father syphilitic.[27]

Well to fourth year, then apoplectic attack with right hemiplegia, including face and loss of speech, passing off in eight weeks, leaving some weakness of arm. In sixth year diminution of sight, weakness in legs, ataxia in arms and legs, especially in gait. Seventh to eleventh year learned well at school but finally completely blind. Twelfth year frequent vomiting followed by intense headaches. Attacks of vertigo. Three months later, epileptiform convulsions. Falls, unconscious, tonic spasm of entire body, incontinence of urine, followed by sleep, recurring every one to two weeks. Severe vertigo. Three months later, deaf.

Pupils dilated and fixed. Constant nystagmus. Percussion and passive movement of head painful. Ophthalmoscope showed high degree of optic atrophy. Its neuritic origin still evident on the left. During the next few weeks convulsions continued and right facial paresis occurred, with three days later deep unconsciousness with varying pupils and slow pulse and ending in tonic rigidity, succeeded by similar attack. Thence great variation in mental state, somnolence, brightness, happiness, irritability, docility, succeeding or alternating with one another. Very frequent convulsions. Following three such in one forenoon, ensued right facial paralysis with eyes turned to right, irregular pulse, fretfulness, all clearing in a few hours, leaving no trace.

Headache, vertigo, vomiting and often pains when head is moved (at such times buries it deep in pillow) continued. One night after going to bed in good spirits she became restless, complained of headache, cried much and about midnight had two severe convulsions from which she did not recover consciousness.

Postmortem.—Extreme new growth of gummatous character, more marked at the base, where it had injured all the adjacent parts of the brain and the cerebellum as well as the herves. Gummatous encephalo-meningitis. Interval hydrocephalus. Gummatous leptomeningitis of cord with marked involvement of vessels and invasion of white substance.
stance.

Had this patient been seen only at the time of the paralysis, at the fourth year, her case would have been regarded as an ordinary infantile hemiplegia. By far the most common form of specific cerebral palsy in children is hemiplegia. Many of these cases, as is the case with epilepsy and with mental defects, if not associated with other symptoms and if of fixed character, can not be differentiated from hemiplegia of other origin, except by the personal or the family history, or by the results of treatment. Often, however, the instability of the condition, or its unexpectedly rapid disappearance, and perhaps repeated occurrence, distinguish it from the usual well-known type of unilateral paralysis. Any form of cerebral palsy may, however, occur.

CASE 33.—Child, 5 years. Parents syphilitic.[28]

Mother manifested symptoms three or four months after marriage. Child born three years later, the second child. The first, born at term after mother had been treated with potassium iodid, had a cutaneous ulceration which cleared on administration of potassium iodid. Patient well until fifth year when it fell a distance of less than two feet. Two days later paresis of left leg, and next day, also of left arm and face appeared. After three weeks inunction, four weeks after onset, all signs had disappeared. Three weeks later numerous moist papular excoriations appeared in folds of skin of lower extremities.

CASE 34.—Girl, 4 years. Parents and child syphilitic.[29]

First and second pregnancies aborted. Third, patient. Fourth had specific symptoms in infancy. Patient in fourth week had syphilitic eruption on palms of hands and soles of feet. Frequent subsequent relapses. Following one such, at 2½ years, paralysis of left extremities and face appeared, disappearing completely in a few days. When four years old a left hemiplegia again occurred, this time with loss of consciousness and preceded by some twitching of left arm. Two days later vomiting, convulsions and fever, incontinence of urine and feces. In three weeks loss of speech and inability to understand what was said to her. In four weeks this improved, so that she knew her mother but could not speak. Gradual contractions in arm and to less extent in leg ensued and shaking of head in this direction and that, and needless striking movements of right arm in air became noticeable. Death from diphtheria.

Postmortem.—Thickening of the pia-arachnoid, typical syphilitic disease of the basal arteries, numerous foci of softening in the hemisphere, alternating with sclerotic areas, loss of ganglion cells in the brain and degeneration of fibers in the cord.

26. Karth: "Syphilis Cérébrale Héréditaire," Rev. mens. des Maladies de l'Enfance, 1888, p. 338.
27. Siemerling: "Zur Lehre von der congenitalen Hirn und Rückenmarkssyphilis," Arch. f. Psychiatrie, 1888-89, p. 102.
28 Marfan: "Hémiplegie chez une enfant hérédo-syphilitique; agée de cinq mois," Annal. de Dermat. et de Syph., 1887, p. 540.
29. Ziegler and Nauwerck: Beitrag zur hereditären Syphilis des Centralnervensystems, also Beiträge zur allgemeinen Pathologie und pathologischen Anatomie, 1888, III, No. 4, p. 387.

CASE 35.—Girl, 10¾ years. Coryza in fourth week.[30]

Sat up first at three and walked at four years. In third year general convulsions with coma, and again in fourth year. At six years suddenly fell while walking, with loss of power on the right side and thick, indistinct speech. No loss of consciousness or spasm. Three weeks later able to walk again. Slight paralysis on right side. Left pupil larger than right. No ptosis or strabismus. No facial palsy. Incisors notched, mentality low, absence of sight on left, retinochoroiditis. Hearing, good. Death in eleventh year from nephritis.

Postmortem.—Leptomeningitis chronica, atrophy of the left hemisphere marked, less of right. Sclerosis of cortex and disappearance of ganglion cells with increase of neuroglia. Disease of the middle meningeal arteries with infiltration by gelatinous nodules.

The following two cases in one family with marked family history are of great interest:

CASES 36 AND 37.—Boys, 9 years, 7 years.[31]

Father syphilitic a year before marriage. First child stillborn; second, dead in convulsions at third month; third, patient nine years old; fourth, lived only a day; fifth, patient, seven years old; sixth, seventh and eighth children up to time of history, healthy.

Patient, nine years. Healthy at birth, no signs in infancy, except that from the sixth week up to the sixth year bilateral convulsions occurred. In his eighth year he is said to have had "meningitis," for six months, very ill, severe pains in head, temporary squint, general loss of muscular strength. Gradual recovery of general power but hemiplegia of left side remained. In the ninth year, in the extremities, this remained complete, with rigidity; in face only partial. Traces of old optic neuritis both sides. Upper incisors defective. Right pupil larger than left. Mercury without effect. Intelligence good and reads well.

Patient, 7 years. In infancy jaundice, snuffles and moist sores about mouth and anus, yielding to specific treatment, and ulcers on nates, lasting 12 months. Never walked or talked well. Could learn nothing at school. In seventh year severe head pains began, with vomiting attacks and loss of bladder control, became clumsy in walking, with irregular purposeless movements and frequent falls, with indistinct speech and could only partially feed himself. Ophthalmoscopic examination negative. Increasing vomiting and headache. Death in eleventh year from unknown cause.

A typical instance of recurrent hemiplegia, with transient initial and subsequent more permanent attack is the following reported by Heubner and well illustrates that absence of history is of little or no negative value:

CASE 38.—Boy, 2½ years. No history.[32]

Born with saddle nose. Weak in infancy and had many ulcers. Slow backward development. When 1½ years old had "shock" with sudden hemiplegia, lasting, however, but three days. No further nervous disturbance until two years four months old, when he had severe epileptiform convulsions. After eight days of such convulsions a second right-sided paralysis appeared, of permanent spastic type. A state of pallor, emaciation, anorexia, indifference to surroundings ensued. Glands, including epitrochlears, enlarged. Slight ptosis. Congenital syphilitic retinitis. Paralysis involved face, the right side of palate and larynx.

Diagnosis, Intra Vitam.—"Infantile cerebral paralysis" caused by encephalitis of cortex and of probable specific character on basis of fundus examination and the presence of "peripheral unilateral paralysis of the glottis, because this defect, otherwise so rare in childhood, may occur in hereditary syphilis.[33] Death from measles at 2½ years.

Postmortem.—Chronic leptomeningitis of cortex with adhesion especially over left hemisphere, areas of softening in cortex, atrophy of convolutions of lateral region of left hemisphere with extensive loss of gray substance. Extreme syphilitic endarteritis of basal arteries and their branches.

In Cases 34, 37 and 43 and in the two following will be seen cases associated with involuntary movements. These may be of athetoid or of choreiform character, or tremor may occur. At the time of occurrence they may or may not be associated with impairment of muscular power. The following very interesting case shows an alternation between the two phenomena:

CASE 39.—Girl, 7 years. Child syphilitic.[34]

She was attacked by a right hemichorea which cleared on specific treatment. Few months later after a fall on forehead, intense pain and paresis of left arm and face and later the leg, which also improved on specific treatment, but was followed by a recurrence of the hemichorea as before on the right and this again disappeared. Death later in coma and convulsions. No postmortem.

This was probably a case of specific arteritis, the phenomena being due to circulatory disturbances and the final death to extensive arterial occlusion or thrombosis.

CASE 40.—Boy, 10 years.[35]

Fourth year, headache, fever and paresis of left side, including lower facial and slightly lessened sensibility in arm only. Left pupil larger than right. Under potassium iodid all vanished except the pupillary condition. In both hands constant spreading and extending of fingers developed, more on right side. Developed well mentally and physically. In his ninth year a double keratitis appeared. In tenth year icterus, stupor, unconsciousness and death all in two weeks.

Postmortem.—Extensive chronic leptomeningitis with adhesions to brain. In gray and white matter numberless gray indurated areas, in size from a hemp seed to hazel nut, the largest being in the third right frontal convolution, immediately in front of the Sylvian fissure and another large one just external to the lenticular nucleus. Hepatitis.

Cases of feebleness of mind or idiocy in which the family or personal history, or stigmata in the patients themselves, are so evident of syphilitic infection as to suggest strongly, almost unequivocally, a causal relation between the infection and the intellectual defect, are very numerous. The many cases reported by Judson Bury,[36] Shuttleworth,[37] Beach,[38] Forbes[39] and Fournier[1] (Page 473) may be referred to. No matter how strongly our suspicion of the specific nature of congenital feebleness of intellect may be, we can not declare it with absolute certainty, even when the family infection is extremely evident, for even at postmortem these cases may show only atrophy, sclerosis, or cyst formation, not differing from that produced by other causes.

If, however, the mental enfeeblement ensues after birth and after a certain degree of intellectual development has been reached, the clinical symptoms are often of so pronounced a character and peculiar course as to give evidence of diffuse and multiple lesions in the brain, not to be accounted for by simple non-development or by atrophy following meningeal hemorrhage or merely circumscribed arterial accidents. At this time, in short, the process is active and the changes peculiar to a specific cerebral process are present. Postmortem examina-

30. Gee: "Inherited Syphilis; Sclerosis of Encephalon," St. Bartholomew's Hosp. Rep., 1880, p. 35.
31. Warner: "Cerebral Syphilis," Brit. Med. Jour., 1888, ii, p. 703.
32. Heubner: "Endarteritis syphilitica bei einem 2½ jährigen Kinde," Charité Annal., 1902, p. 126.
33. Heubner: "Syphilis im Kindesalter," Gerhardt's Handb. d. Kinderhlk., 1896, p. 58.
34. Allson: "Some Cases of Syphilitic Chorea," Reference in Jahrb. f. Kinderhlk., 1877, xii, p. 291.
35. Jacobson: "Et Tilfælde af diffus Periencephalitis og dissemineret Hjernesklerose hos en 10 Aars Dreng med. Kongenit Syfilis," Hosp.-Tid., 1894, 4. R., ii, 17.
36. Judson Bury: "The Influence of Hereditary Syphilis in the Production of Idiocy or Dementia," Brain, 1883-4, p. 44.
37. Shuttleworth: "Idiocy and Imbecility Due to Inherited Syphilis," Am. Jour. Insanity, 1888, p. 381.
38. Beach: "Cases of Idiocy and Imbecility Due to Inherited Syphilis," Am. Jour. of Insanity, 1888, p. 387.
39. Forbes: "The Influence of Hereditary Syphilis on the Nervous System," St. Bartholomew's Hosp. Rep., 1902, p. 37.

tion of these cases confirms suspicion aroused by the clinical symptoms.

On the other hand, when these children live on to a point where active symptoms have long ceased and complete imbecility has existed for some years, postmortem changes in the brain may resemble those found in cases imbecile from birth. By analogy it may be assumed that many of these latter are brought to their condition by earlier syphilitic disease, possibly *ante partum*, which has ceased or burned itself out, leaving a scarred and defective brain.

Those cases of mental impairment that begin later may have their starting point at any time up to the end of childhood. When the commencement is in a child who has attained a considerable psychical level, the case assumes not infrequently all the clinical characteristics of progressive dementia and general paralysis, and becomes then an instance of dementia præcox. Whatever other factors may be potent in the etiology of this affection in certain instances there can be no question of the direct and evident syphilitic nature of many of these cases.

CASE 41.—Girl, 14 years.[39]

Mother had brown spots all over her body in the eighth month of her first pregnancy, which ended in still-birth; second child, imbecile, died at 4½ years; third, patient; fourth, died in convulsions in sixth week; fifth, had coryza in infancy, 11 years, living. Of remaining five children, three died in infancy.

The patient had coryza and was covered with "spots" in infancy. Then developed well physically and mentally up to her 10th year, when mind began to fail. Began to sit still and take no notice of things and spoke only when spoken to and then only of things that occurred long ago. Thirteenth year, walking difficult, incontinence at times. Irritable and easily frightened. Can only name a few simple objects and does not know how many fingers she has until she counts them. Knee jerks increased. Well marked, disseminated choroiditis.

CASE 42.—Boy, 10 years. Father syphilitic.[40]

In infancy coryza and sores on nates. Grew up strong and learned fairly well and was bright until after his sixth year when he began to have some difficulty with gait, complained of headache and was irritable. Then progressive mental impairment and was sent to asylum shortly before ninth year. Death at 10 years.

Postmortem.—Chronic diffuse meningitis.

Warner mentions a boy who showed gradual mental deterioration for three years, thence a stationary condition. His brother had infantile hemiplegia with subsequent athetosis. Specific history.

The following case with a course of 15 years from onset of the first cerebral sign to death is typical of this phase of cerebral syphilis, and may serve as an example of many others which can not be given in detail within the limits of this paper.

CASE 43.—Girl, third to eighteenth year. No family history.[41]

In second month skin eruption and began to emaciate, in seventh month an eruption on back, hands and feet and ulceration about anus. Mother was then discovered to be in secondary stage of syphilis which began in the pregnancy with this girl. Following the use of calomel the child became apparently well, grew and walked at 1½ years. In third year sudden squint, eye turned out and right pupil dilated. Seventh year went to school and made good progress. In good general condition and with only occasional slight inflammation of eyes, went on to her ninth year when mental advance ceased. Her love of order and cleanliness and her docility ceased. Punishment made her worse.

Eleventh year: Convulsive tremulous movements in the muscles (treated for chorea). These ceased after some months, but she remained at the point attained intellectually in her ninth year. Her temper became more and more irritable but she was able to be confirmed in her 15th year. Menses which began at 12 years ceased in this year. Now, in addition to the progressing mental failure, came attacks of mania with delirium and hallucinations; she heard voices telling her she was going to be whipped. At times refused food, cut her dresses and cried aloud, "I am crazy, I am crazy." Soon after, a state of complete imbecility ensued. Would sit or stand in one place for hours taking no notice of anything about her, answering, if spoken to, by disconnected words, or inarticulate noises. Death in convulsions, chiefly right-sided, and in extreme emaciation, at 18 years.

Postmortem.—Exostosis of inner table near foramen magnum. Extreme chronic leptomeningitis. Left lateral ventricle greatly dilated. Ependymitis granular. Right lateral ventricle also dilated.

In this case we see the early premonitory symptoms, which in this instance happened to be cranial nerve disturbance, which, as mentioned in the beginning of this paper, may be among the early warnings of the approaching storm, occurring six years in advance of the apparent onset of intellectual failure. Here, however, probably insidious changes in character or intellect were overlooked by the parents, in the period between the third and the ninth year. We see here also the absolute worthlessness of a negative family history, as far as statements made by parents are concerned. This is illustrated in a number of instances among the cases studied. In a case of Barthelemy's, cited by Fournier[1] (Page 508), specific history was denied until on forced questioning of the mother she admitted deception and stated that she had been infected before marriage and "cured" in a few months. Case 24 illustrates well the necessity of examining the other members of the family in every case with negative history.

If delay in instituting treatment is to be dependent on the awaiting of definite or reliable statements from the parents, the unfortunate consequences to innocent lives may easily be imagined, when we have to do with an affection in which only the earliest therapeutic intervention can be relied on to effect complete restitution. Many of these cases of progressing dementia in children are associated with convulsive phenomena, either as initial or as intercurrent manifestations. They are usually, however, subordinate to the predominating psychical changes.

CASE 44.—Reported by Fournier (page 463).

Boy, 7½ years. Parents, syphilitic; child, syphilitic; was thought cured. Developed well physically and mentally. Suddenly fell unconscious in convulsions, twice repeated in same week. Was claimed to be in good health but close questioning showed that for three weeks had complained of headache at times, vertigo, photophobia and tinnitus, and governess said he had been for several months inattentive, forgetful, working against his will, forgetting what he had learned, at times seemed confused in mind, not answering questions, etc.

The prevailing feature of these cases is cessation of mental advance or advancing mental enfeeblement with alteration in the psychical nature, not infrequently with hallucinations, occasionally with mania, but almost never with delusions of exalted type, at least during the period of childhood, previous to the fifteenth year.

The following instance shows how wide a range of clinical pneumonia is possible in this affection:

40. Warner and Beach: "A Case of Chronic Meningitis, Probably Syphilitic, and Causing Progressive Dementia," Brit. Med. Jour., 1887, i, p. 935.

41. Mendel: "Ueber hereditärer Syphilis in ihrer Einwirkung auf die Entwickelung von Geisteskrankheiten," Arch. f. Psychiatrie, 1868-9, p. 308.

CASE 45.—Reported by Fournier[1] (page 473).

Girl, 10 years. Parents and child syphilitic. Father neglected treatment. Mother died of probable cerebral syphilis; had also neglected treatment as soon as primary lesions disappeared. First child, still-birth; second, syphilitic child, dead at six weeks; third, patient. Specific signs in third year, clearing with treatment. Good development physically and mentally up to ninth year, "a bright, intelligent, interesting child of cheerful disposition."

In ninth year nocturnal enuresis appeared. Later severe sudden convulsions with unconsciousness, frothing at mouth and biting tongue at irregular intervals. Slight change of character and mental enfeeblement for next six months, then rapid deterioration, lost all she learned at school. Then embarrassment in speech, bad pronouncing, clipped words. Enfeeblement in vision and hearing. Delay in sensory perception of pain. Inequality of pupils. Vomiting attacks. Diminution of muscular power, indecision and awkwardness, dropping objects. Frequent intermittent contraction of certain muscle groups, especially jaw. Tremor in extremities and twitching of same. Paralysis of sixth pair, squint and diplopia. Incontinence of urine and feces. Progressive course. Treatment, instituted late, without avail. Complete imbecility and paralysis. For some weeks before death life was merely automatic, ending in coma.

Postmortem.—Foci of thinning and thickening of skull. Diffuse pachy-meningitis and lepto-meningitis with adhesions. High degree of softening of gray matter, nearly lacking in places, foci of softening in white substance.

Surely in all medicine there can be no more pathetic instance of innocent suffering than this case illustrates.

Three cases of early progressive dementia in one family are reported by Homen.[42] One of these patients had had slight attacks of faintness or vertigo, pallor and turning of eyes about once a month from the age of 3 years, then ceased at 8 years. In twelfth year attacks of headaches, vertigo and pains in arms and legs. General feeling of weakness and gradual mental deterioration, ending in complete dementia and paralysis, bedridden in 3 to 4 years. Pupils were dilated and sluggish. Syphilis was denied by the father. Mother's first pregnancy aborted, the second, fourth and fifth children were the patients, the third, eighth, ninth, tenth and eleventh all died in infancy, the sixth, seventh and twelfth were apparently well. Postmortem showed cerebral disease to be syphilitic arteritis.

These cases show how necessary it is to make a microscopic examination of the arteries of the brain before pronouncing them free from change. Extensive gross changes of the larger arteries of the body were to be seen microscopically, but the lesions of the cerebral vessels were only found, in this instance, by microscopic examination.

This was so in a case of Ashby's[43] in which the large basal arteries appeared normal, but extensive disease in the small vessels supplying the cortex existed. This was also the fact in Case 10 in which vessels that appeared normal were microscopically found to be affected. Heubner[44] also calls attention to this fact.

The ocular phenomena are a prominent feature of cerebral specific disease in children, and are of great diagnostic value because they are so often early phenomena. This is especially true of changes in the pupils, inequality, sluggish reaction or complete fixation, which may be present early in the disease. Choroiditis and optic atrophy may occur very early, especially the former. Keratitis is usually somewhat later in its development, but of extreme value in the diagnosis. It may be, in fact, the determining clinical factor in the diagnosis of a symptom-complex previously obscure.

CASE 46.—Girl, 8 years.[45]

Mother had syphilitic stricture of rectum, non-reacting pupils, vertiginous attacks, two miscarriages, two other children died in infancy. Patient born with specific rash. Fifth year, mental retrogression; sixth year, inflammation of eyes; seventh year, widely dilated pupils, rigid to light, left larger than right; in eighth year no reaction to accom. Double optic atrophy. Retinochoroiditis. Progressive dementia.

CASE 47.—Boy, 6 years.[46]

Father syphilitic eight years previous to boy's birth; mother had three miscarriages; two other children died in infancy; patient premature; mental advance ceased in fourth year. For hours sits alone and still, then restless, grasping at everything or repeating all he hears. Double opacity with nearly complete adhesion of iris on right, partial on left where pupil is widened and without light reaction. Retinochoroiditis.

In 25 cases of acute infantile hemiplegia, Haddon found a history of syphilis in the family or signs of the disease in 15 instances, or 52 per cent.

CASE 48.—Child, 9 years.[46]

Ulcer palate, caries of nasal bones, iritis, keratitis. Had been taking mercury six months when epileptic attacks occurred. Six months later notwithstanding continued treatment hemiplegia supervened with subsequent progressive dementia.

CASE 49.—Child, 10 years.[46]

Hemiplegia when one year nine months old. Interstitial keratitis and extensive choroidal atrophy.

CASE 50.—Child, 2 years.[46]

Father under treatment for syphilis before birth of patient. Child had snuffles and rash in early months. Progressive mental deficiency and slowly increasing rigidity in all extremities.

Postmortem.—Marked sclerosis of the convolutions.

The frequency with which specific meningitis is limited to, or concentrated at the base makes it probable that cases of "basal meningitis" may be of specific origin more often than hitherto supposed. Holt[47] mentions such an instance. Haddon believes also that it is not so very infrequent.

The not infrequent discovery of hydrocephalus in the postmortem examination of cases in which well-marked syphilitic cerebral disease is found, as in Cases 13, 16, 32 and 43, of those here cited, and in several of the series not mentioned in this paper; the occurrence of well-defined clinical evidence of hydrocephalus in the subjects of cerebral syphilis that do not come to autopsy; the coincidence of hydrocephalus among the brothers or sisters of cerebral syphilitic patients; the presence of specific lesions, or the history of such, in the patient or in the brothers, sisters or parents; all strongly suggest some causal relation between the hydrocephalic condition and the specific taint. Moreover, the very frequent occurrence of several miscarriages, still-births, and early infant mortality, in the families in which hydrocephalic children appear, tends to confirm the evidence that syphilis is not infrequently an important and direct factor in the etiology. Thus, of 45 families, in which 145 pregnancies occurred, 5 per cent. resulted in still-

42. Homén: "Eine eigenthümliche bei drei Geschwistern auftretende typischen Krankheit unter der Form einer progressiven Dementia in Verbindung mit ausgedehnten Gefaessveränderungen (wohl Lues hereditaria tarda)," Arch. f. Psychiatrie, 1892, p. 191.

43. Ashby: Brit. Med. Jour., 1898, p. 1150.

44. Heubner: "Die luetische Erkankungen der Hirnarterien," Leipsig, 1874; and Ziemssen's Encyclopedia, xii, p. 311.

45. Kalischer: "Ueber infantile Tabes and hereditär syphilitische Erkrankungen des Centralnervensystems," Arch. f. Kinderhlk., 1897-8, p. 56.

46. Haddon: "Congenital Syphilis as a Cause of Nervous Diseases in Children," Brit. Med. Jour., 1892, ii, p. 1164.

47. Holt: "Diseases of Children," p. 1099.

births, 10 per cent. in miscarriages, 16 per cent. died in early infancy, and 32 per cent. were hydrocephalic.

In a case reported by Mendel[41] of a hydrocephalic child that died at 6 months, out of a family of eleven children not one survived, only one living to the age of a year, dying then of convulsions, the remainder dying within the first three months of their existence in convulsions or with choleraic symptoms. The father had had syphilis. In a case cited by Engelberg[48] of 14 children by a syphilitic father 9 died in infancy, one of hydrocephalus. Bärensprung[49] reports many postmortem examinations of hydrocephalic children of syphilitic parents.

What is it that induces in one case the concentration of the effect of the specific poison on the brain while another individual enjoys complete immunity from any cerebral implication? This is a problem to which no complete solution is at present possible. Interesting, however, in this connection are a number of cases in which the apparent initial phenomena have followed a blow or fall on the head. They are not so common that we may refuse to believe them more than coincidences, occurrences brought into the picture by the common tendency of the parent to attribute everything to an accident. Nevertheless they can not be entirely ignored. It may be that, in the one case, the brain by inherited or by acquired deficiency in vitality or in power of defense, becomes a *locus minoris resistentiæ*; while, in another instance, concussion by its circulatory and nutritive disturbances produces a similar condition. In several cases of the series on which this study is based, blows or falls on the head preceded the onset of the cerebral disease. It was noted also, among others, by Lallemand's[50] case, by Rul Ogez[50] and by Heubner[51] in adults. Physical strain may be perhaps also occasionally a factor.

Virchow also noted the influence of external accidents on the localization of syphilis, and Heubner remarks that "if this is true of the skin, bones, etc., it may be assumed for the nervous system," and quotes Paracelsus to the effect that "syphilis takes, in every man, the character of that disease to which he is inclined by hereditary or other predisposition."

DISCUSSION.

DR. W. P. NORTHRUP, New York City, said that any one who has lived within the boundaries of a foundling hospital of a metropolitan district for 12 years knows how many such cases there are.

DR. WILLIAM J. BUTLER, Chicago, said that if recent articles on this subject serve to stimulate investigation and the reporting of bona fide cases, he is sure that cerebral syphilis will be found to occupy relatively quite as important a place in the pathology of brain lesions in children as it does in the adult. Its clinical manifestations form a picture that permits of as logical a diagnosis as it does at a later period of life. As Dr. Fairbanks pointed out, it may present itself clinically as an epilepsy, as a meningitis, with all the bizarre accompaniments of the specific basilar meningitis of the adult, as a cerebral palsy, with an onset and course reflecting in a convincing manner its specific etiology, as a progressive dementia with mental impairment, anarthria and focal paresis, and sometimes rigid pupils, as in a case he recently reported, leaving no doubt as to its cause. In the cerebral syphilis of children one usually finds some other evidence of hereditary syphilis, as an atrophic choroiditis, deafness, Hutchinson's teeth, etc., but the absence of these should not in any instance dissuade one from a diagnosis any more than it would in the adult when we are not accustomed to depend on the statement of the patient nor the absence of external evidence of recent or old syphilitic lesions. And it is exactly in those cases in which the early manifestations were slight or went unobserved that the cerebral changes may develop in children. Its early recognition is of paramount importance from a prognostic standpoint, as the latter will of necessity depend chiefly on the promptness with which treatment is instituted.

48. Engelberg: "Behrend's Syphilidologie," iii, 1862, p. 37, etc.
49. Bärensprung: "Die hereditäre Syphilis," Berlin, 1864.
50. Heubner: Ziemssen's Encyclopedia, xii, p. 301.
51. Ueber die Hirnerkrankungen der Syphilitischen. Archiv für Heilkunde, xi, 1870, obs. 47.

SOME IMPORTANT CONSIDERATIONS IN THE EXTRACTION OF CATARACT.*

MARK D. STEVENSON, M.D.
AKRON, OHIO.

Established methods of cataract extraction will be discussed in this paper only sufficiently to draw attention to certain of their important points and to compare them with those which I advocate. Soft or membranous cataracts or such others as some traumatic varieties, which do not require extraction, but needling, removal by capsule punch, or other kind of operation, will not be considered.

When the lens is found to be opaque, judgment should determine, after examination, if it is necessary or wise to operate, and if so by which method. The field of vision should be taken, and this is best done by the use of a candle, or preferably two, whereby the field may be mapped out with tolerable certainty. The tension should always be determined. An examination of the urine sometimes gives suggestive hints as to the cause of the cataract, the presence of retinitis, and probable length of life. Herbert[1] rejects cases in which albuminuria is associated with edema. The general state of health should be inquired into, especially bronchial or asthmatic conditions, whether or not the patient can lie supine for a long time, and the position usually assumed in bed. Some patients can not lie on their backs and provision should be made for others so that they may be supported in bed. It is impossible here to dwell on all the detailed information which should be obtained regarding each patient and the many things that must be taken into consideration in determining the propriety of an operation.

Examination into details increases the confidence of the patient, but care should be exercised not to dwell too much on every little defect and thus promote nervousness and anxiety and make the patient refuse an operation, preferring blindness, or the useless treatment of some promising quack. The ophthalmic surgeon, more than any other, should obtain the hearty confidence of these introspective, nervous, blind, old people who are preparing for an operation on their most delicate organ.

I shall not enter into much discussion of the advisability of operation, but with others, e. g., Brudenell Carter[2] (Bulson[3] very fully considers the advisability of operation), think that old patients, if unable to attend to their ordinary business because of uncomplicated cataract (not associated with any special disease), whether it be mature or not, should be operated on without too long waiting, since these patients, formerly active, often quickly decline and deteriorate in mind and body because of the enforced inactivity. This breakdown is es-

* Read in the Section on Ophthalmology of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.
1. Herbert: "Cataract Extraction."
2. Carter: "Lectures on Cataract."
3. Bulson: THE JOURNAL A. M. A., Sept. 23, 1905.

pecially marked in the cardiovascular system which, in turn, affects the kidneys and other organs with end arteries. A little red reflex or the presence of transparent cortex do not deter me from operating, provided that the vision of neither eye is sufficient for the patient's needs, that the cataract is slowly progressive, that the field of projection is good, and that there is no suspicion of serious intraocular disease, e. g., beginning retinal detachment or the various forms of serious choroidoretinitis. Granting that mild iritis is more common and that an operation for secondary cataract is more often required after operating on immature cataracts, is it not even then better to do so than to keep the patient waiting months and sometimes years? The final results should be as good as after the extraction of mature cataract, and vision is restored much sooner, thus aiding the general health. Having determined that an extraction operation is feasible and advisable, the patient should be impressed with the necessity of as strict antiseptic and aseptic precautions as are possible. He should be made to know that his assistance in keeping quiet and in properly turning the eyes is necessary to obtain a good result; in short, he must be ready to do his part. Unless exceptionally intelligent, he may not appreciate the importance of going to a hospital instead of having the operation performed in a private house, and the dangers should be fully explained to him.

If chronic inflammation of the conjunctiva is present, treatment should be instituted to cure the discharge before subjecting the patient to the danger of infection after operation. A test bandage may be placed over the eye for several hours and the discharge, if any be present, examined microscopically. If pus is discharged into the eye sac from the lachrymal sac and the diseased condition can not be cured, or time and circumstances will not permit, the puncta may be obliterated by cauterization or the canaliculus closed by a ligature, just before operating, as recommended by Knapp.[4] If time permits, an operation obliterating the lachrymal sac is often justifiable in these cases. Gifford[5] slits the upper tear points and injects some indifferent solution in cases seen several days before operation.

For one week before the operation I have the patient wash the eye by means of an eye bath three times a day with some sterile solution, such as saturated solution of boric acid in distilled water or normal saline solution. Eye baths or eye cups if kept scrupulously clean, being frequently boiled and always thoroughly washed and dried before using, are very serviceable. Patients are shown how to use the eye bath and are also given the following printed instructions:

"The eye bath about one-third full of the solution, should be gently pressed against the closed eyelids while the head is slightly inclined forward. The head is then slowly thrown backward, the lids are opened and closed repeatedly, and the eye bath moved slightly from side to side, during sufficient time to count to 30 or 40, so that the solution may completely wash out the eye sac. The head is then again inclined forward when the eye bath is removed (the eyelids remaining closed for a few moments), and its contents, which should be used for one eye only, thrown away."

By this means the eye sac is mechanically and thoroughly cleansed with less irritation and with a greater degree of comfort than by any other. The bath is also used on the morning of the operation and about one hour before operating, after which a sterile eye pad is fastened by strips of adhesive plaster over the eye. The nose should also be sprayed two or three times before operating with a slightly antiseptic solution. Lippincott[6] suggests spraying the nasal cavities with a 1 to 2000 potassium permanganate solution. On the evening of the second day before the operation a large dose of some cathartic should be prescribed, and in certain cases a large enema given in order that the bowels may be locked for one or two days after operation so as to disturb the patient as little as possible. All the hair on the head should be washed the night before the operation, particularly the eye-brows and eye-lashes. In certain cases I express the contents of the glands and ducts on the edge of the lids by gently stripping these margins between the finger on the skin and a smooth glass rod on the conjunctival surface. Sometimes this should be done on several days and in some cases a mild sterile ointment should be applied. Great care is exercised in preparing the field of operation, and I think only unirritating solutions, such as boric acid, normal saline solution, etc., should be used. The skin surfaces about the eye should be thoroughly cleansed, and the surgeon himself or some skilled assistant should then cleanse the conjunctival sac as thoroughly as possible. This may best be done by pressing the solution from pledgets of cotton, sometimes by gently and carefully wiping the conjunctiva of the lids with the moistened cotton, avoiding the slightest injury to the cornea. The hair and scalp should be covered with either a rubber bath cap or towel which has been kept in an antiseptic solution. Other sterile towels, preferably dry, are laid over the neck and chest of the patient extending to the chin, but not above the mouth, as the patient's breath would then be thrown directly into the eyes.

Since micro-organisms (*Streptococcus* and *Staphylococcus pyogenes* and *Pneumococcus*) normally abound in the saliva of both patient and operator, infection from this source should be given consideration. G. Hotta[7] states that infection occurs without fail if the saliva is brought into pocket wounds of the cornea and is likely to occur if there is impeded drainage of the tears from an affection of the lachrymal passages. The patient's and surgeon's mouths may be rinsed out with an antiseptic solution before the commencement of an operation.

Instead of directing the patient's breath toward his eyes by means of a towel placed over the mouth and nose, which should never be done, I have his breath directed away from the eyeball by a small screen made in the following way: A strip of adhesive three or four inches wide and six or seven inches long is covered with gauze on its adhesive side, with the exception of about one-half an inch of its width along one margin, throughout its entire length. By this upper uncovered margin it is fastened across the bridge of the nose and both cheeks an inch or more below the eyes, so that it hangs down over the nose and mouth and directs the patient's breath and saliva away from his eye. It should next be covered with sterile gauze.

If the operator is suffering from coryza, cough or affections of the mouth, or if compelled to speak much and loudly, as when teaching, Hotta[7] believes a veil of gauze is advisable. Axenfeld, Haab, Mayweg, Blaschek, Kuhnt, Flügge, Eversbusch and Hansell[8] also favor mouth veils. Harold Gifford[5] describes a gauze covering for the nose, mouth, beard and hair, which also prevents dandruff from falling directly on the operative field, as being very essential. The scalp

4. Knapp, Norris and Oliver: "System of Diseases of the Eye," vol. iii, p. 896.
5. Gifford: Trans. A. M. A., 1903, p. 150.
6. Lippincott: THE JOURNAL A. M. A., 1900, p. 930.
7. Hotta: Klin. Mon. fuer Aug., 1905, vol. ii, p. 237.
8. Hansell: Annals of Ophth., April, 1905

and hair of every surgeon should always be covered by a gauze cap. I have made a simple spectacle-shaped appliance that lies below the surgeon's spectacles, if he wears any, over the bridge of the nose and on the cheeks, and is supported by strong temples over the ears. A strip of gauze about one yard long may be drawn over this frame so that the ends meet below. The lower ends of these strips for a distance of ten or twelve inches are then split by scissors and the two halves, one on each side, tied or fastened by a safety pin behind the neck so that the gauze hangs over the mouth and passes under the chin around the neck. As many layers of the gauze may be used as are thought to be necessary. With this appliance the surgeon's breath will not pass upward into his own eyes or blur his lenses, but pass out to the side, and all saliva or excretions from the nose will be arrested in the gauze and he can still talk and breathe freely.

The confidence of the patient is increased by careful attention to every detail. A little previous instruction as to his own behavior, how to turn the eyes downward and sometimes also a little outward, is very helpful. In particularly nervous individuals I sometimes introduce the speculum in the eye under cocain anesthesia at my office or some time before operation and explain to them how to hold and how to turn the eye up, down, to the right and left, and thus permit them to become accustomed to it. Herbert[1] of India insists on carefully training the patient. Many a blind patient can easily direct the eyes downward toward his own uplifted hand. Sometimes I hold instruments about the patient's face and touch the eye, pretending that I am operating, until the patient being assured that I am nearly through becomes quiet, then I commence to operate. I have never been detected in this ruse.

I usually sterilize my instruments by boiling them from five to ten minutes, those with cutting edges being wrapped in cotton, and then place them in a sterile solution contained in a shallow tray, the bottom of which is covered with a few layers of sterile gauze to keep the instruments from coming in contact with each other.

In addition to about six instillations of 4 per cent. sterile cocain solution, a minute or two between each instillation, the lids remaining closed to prevent drying of the corneal epithelium, I inject a few minims of a sterile adrenalin and cocain solution with a sterilized, aseptic, all metal, solid-plunger, hypodermic syringe under the limbus conjunctivæ where I intend to enter the Graefe knife in commencing the section, and also in the opposite limbus where the point of the knife is expected to exit from the anterior chamber. This adrenalin and cocain solution is prepared by placing a hypodermic tablet of adrenalin and cocain in fifteen minims of distilled water which is boiled for two or three minutes. This gives a sterile solution of approximately 1 per cent. cocain and 1/4500 adrenalin. This assists me in commencing a large conjunctival flap, which I believe should extend three or four mm. beyond every portion of the corneal flap and not merely from eight to ten mm. at its upper margin as made by others, e. g., Clarke.[9] The adrenalin greatly checks bleeding under the flap, which should be folded back on the cornea at once to prevent the blood from being forced into the anterior chamber. I recently learned for the first time that Koller and H. Gifford[10] had made subconjunctival injections of cocain at the limbus, and that Gifford formerly made large conjunctival flaps. In the same paper he states that he abandoned this hypodermic method of using cocain because the artificial edema of the flap prevented ready coaptation, and he also advocates a small conjunctival flap. I have always used the adrenalin and cocain together and find that the flap adheres very readily and strongly, not being edematous. It seems that the trifling disadvantages of this large conjunctival flap, viz., hemorrhage, care of folding it on the cornea when it partially obscures the iris, and rarely filtration edema, are far outbalanced by its great advantages, since it speedily becomes agglutinated to the raw surface on the sclera closing the wound externally and sealing it, and thus aids in the accurate coaptation, and smooth and speedy healing of the scleral and corneal wound margins with lessened postoperative astigmatism, and comparative immunity from after infection, incarceration, or iris prolapse.

The knife is first entered into the temporal conjunctival bleb produced by the subconjunctival injection of the cocain and adrenalin solution three or four mm. or more from the sclerocorneal junction. After passing through the bleb the point of the knife is directed toward the center of the eye so as not to get between the lamellæ of the cornea, and when it has opened the anterior chamber some of the cocain enters and renders the anesthesia more profound. The knife is passed across the chamber and through the opposite corneoscleral junction into the other conjunctival bleb. I then make a large section in the corneoscleral junction, including nearly the upper half of the cornea, with a very large completely-bordering conjunctival flap. A small section strips the cortex from the lens, rendering the delivery of the latter difficult, requiring greater force, entangling the iris, and bruising it and the lips of the incision between which latter cortical débris is likely to be retained, thus giving a starting point for infection.

In some patients with shallow anterior chamber, in order not to scalp the iris, it is better to make a smaller section at the corneoscleral junction than the one described, and to enlarge it to the required dimensions by strong blunt-pointed scissors. If there is a deep anterior chamber the conjunctiva may be raised without the use of the hypodermic at the point of exit of the knife, so as to obtain a conjunctival flap by waiting a moment after the knife has passed through the cornea and sclera, or sometimes by slightly turning the knife so as to permit a slight amount of aqueous to flow out under the conjunctiva (Brudenell Carter[2]). The use of the hypodermic is to be preferred to this method, in which too much aqueous might escape, and the iris, falling over the knife, might be scalped and a portion of it sacrificed. It is easy to get a large conjunctival flap when started correctly with the above-mentioned precautions, if the section lies clearly in the corneoscleral junction and not as usual in the cornea. It should be remembered that in front at this junction the sclera slightly overlaps the cornea, and such sections should include not only a little of the cornea internally, but also some of the sclera externally, and must do the latter in order to have a conjunctival flap. This is not identical with the purely scleral section described by Fuchs.[11]

In making the incision it is well to have the patient look downward and a little outward so as to give the point of the knife greater freedom of movement without sticking into the inner ends of the lids. Care should also be taken that no portion of the blade which has once touched the lid margin be allowed to enter the section. The cross-bar of the speculum should be well

9. Clarke: Opthalmology, July, 1905.
10. Gifford: Am. Jour. Ophth., November, 1904.
11. Fuchs: "Text-book of Ophthalmology," p. 695.

down against the cheek, as in my adjustable speculum.[12] The speculum described by Beard[13] is also excellent, since it can be bent so as to place the cross-bar on the cheek. Each one has much the same old style of solid lid holders which will not catch the corneal section on removal or permit the contents of the glands in the margins of the lids to be deposited on the section. I think that when the section is made in the junction between cornea and sclera, although there is greater hemorrhage, it is to be preferred to one made in the cornea only, for the following reasons:

1. Since there is a good blood supply at the limbus, healing will be more rapid than in the bloodless cornea.

2. A conjunctival flap with all its advantages may be obtained which can not be done in a purely corneal section.

3. A section within the cornea will usually be smaller and therefore scrape more cortex from the lens and will have its margins more severely wounded than will the larger section in the sclerocorneal junction.

4. The more peripheral location of the wound is an advantage in delivering the lens, as it has to turn less on its axis.

5. Tags of capsule, etc., are not so liable to be incarcerated in a peripheral section, since it is farther from the pupillary area and heals much more promptly with less escape of aqueous, being protected by the conjunctival flap. The danger of prolapse of the iris, which on first thought might seem to be increased, is lessened.

6. The less peripheral the incision the higher is the degree of postoperative astigmatism (Majewski[14]).

After instilling another drop of cocain the conjunctival flap, by means of a spatula, should be carefully folded back on the cornea (the larger the flap the more easily this is done and the better it remains) else it would subsequently be in the way and possibly might be cut off. This folding back of the flap on the cornea should be done as soon as possible after the section is completed, as otherwise blood might be forced into the anterior chamber. If there is some hemorrhage from the conjunctiva a few drops of adrenalin should be instilled and nothing further done for a few moments until all the bleeding has ceased.

After telling the patient to expect a little momentary pain and cautioning him quietly and gently to keep looking downward, both eyes open, without any tension or squeezing and to keep his hands open and not set the jaws, I pass an iris forceps, with small teeth only on the lower back edge and not on the end, into the anterior chamber. The forceps grasps the iris a very little beyond the middle of its anterior surface and never at or near the pupillary margin, as is generally advised in all the literature at my command, when any specific instruction is given. The iris is then withdrawn folded on itself, until the pupillary edge lies just outside the corneoscleral incision. By grasping the iris as described its whole width may be withdrawn from the eye with only one-half the traction and correspondingly less pain and tearing of the iris tissue than if it be grasped at or near its pupillary margin. The iris should be pulled no more than is absolutely necessary, so as to wound this delicate nervous structure the least possible and thus reduce pain, exudation and hemorrhage. For example, it can be readily understood that if the iris is four mm. in width and it be grasped at the pupillary margin, this margin would have to be drawn eight mm. from its original position in order to have the whole width of the iris outside the incision. If the iris be grasped at the middle as described the forceps would need to be withdrawn only four mm. and the pupillary margin would be stretched only four mm. from its original position instead of eight mm. as in the other method, one-half as far, only one-half as much traction, and less than one-half as much tearing and injury. By means of a sharp pair of strabismus or other scissors held alongside and parallel to the forceps, the folded iris tissue is cut through with one snip in the vertical meridian from pupillary edge to outer periphery, a true sphincterotomy and iridotomy, but not an iridectomy, since no iris tissue is removed. Properly speaking, sphincterotomy means division of the sphincter only, but I prefer to use it in this wider sense, since the term iridotomy, although more proper, has been already used for a different operation and would be likely to give rise to confusion. I have been performing sphincterotomy for some time, and until the preparation of this paper believed it to be a new method. I recently found that Williams[15] in 1881 and Meyer[16] in 1887 incidentally referred to it, each, however, in only a part of one sentence.

I think the general consensus of opinion, even though contrary to that of many distinguished surgeons, is that a combined operation is usually preferable to simple extraction, especially in complicated cataracts or those with posterior synechiæ or rigid pupils, in that there is less danger of subsequent iris prolapse or incarceration, less tearing of the iris tissue in general, and less retention of cortical matter because of less stripping of the lens by the divided sphincter; and also because less pressure is required to expel the lens through the enlarged pupil.

Preliminary iridectomy or sphincterectomy seems to give excellent results, but it exposes the patient to the dangers of infection through two operations requiring the opening of the eyeball. It does not seem that the facility of removal is increased sufficiently to warrant the extra risk, loss of time, expense and trouble to the patient. Objections urged against the combined operation are that it mutilates the iris and furnishes a focus for infection, that the light entering the larger pupil dazzles the patient and is not so perfectly focused as that passing through a small pupil. I do not wish, however, to thrust myself out on this common battlefield.

Dividing the sphincter and width of the iris before attempting delivery of the lens merits consideration for the following reasons:

1. If they are completely divided less resistance will be offered by the sphincter and iris to prevent the escape of the lens from behind them, so that less pressure will be required to deliver the lens and consequently less tension is placed on the suspensory ligament, and there is less tendency to prolapse of vitreous.

2. Since the iris is cut completely through, the anterior support to the upper margin of the lens opposite the section is greatly reduced, so that the upper margin may be more readily tilted forward and pass out of the eye without so much chance of turning over or other accidents.

3. Because of the large opening through which the lens may pass, there will not be nearly as much stretching or rupturing of the other portions of the pupillary margin and iris tissue, and not as much subsequent exudation, even though there might be more exudate and

12. Stevenson: Ophthalmic Record, April, 1904.
13. Beard: Ophthalmic Record, January, 1905.
14. Majewski: Annals d'Oculistique, vol. cxxvi, 90.
15. Williams: "Diseases of the Eye."
16. Meyer: "Diseases of the Eye."

hemorrhage just after making the incision in the iris. At this time, however, blood or exudate can always be washed out of the eye by the irrigator. The more tears or ruptures in the pupillary margin of the iris, the greater the number of posterior synechiæ which subsequently form between the torn iris and capsule.

4. The margins of the larger opening through which the lens may be passed do not strip the cortical matter from the lens mass and retain it as does an undivided sphincter. The coloboma furnishes a sluice way through which the soft cortical matter may be readily removed (Bulson[2]).

5. Thickened, inelastic, flabby irides unless incised, are much stretched and torn, and are more prone to remain outside the section, or later to prolapse because they are pressed into a funnel shape during the exit of the lens.

6. Free division of the iris establishes easy and continuous passage for the fluid between the anterior and posterior chambers, even to the periphery. When the iris and sphincter are undivided the fluid is said to collect in the posterior chamber, especially behind the peripheral portion of the iris, and if the corneal section should suddenly open because of some sudden pressure of the eye muscles or other cause, e. g., coughing in chronic bronchitis, this pent up fluid is liable to prolapse the unsupported iris in its rush to escape from the eyeball.

7. It is easier to replace the divided iris within the section at the time of operation (a) because of the free connection between the anterior and posterior chambers; (b) the sphincter divided in only one place is stronger than when torn in many; (c) the body of the iris and sphincter is not thickened so much by exudation and hemorrhage; (d) the elasticity of the structure has not been destroyed to the same extent.

8. There can not be as strong a tendency to the development of postoperative glaucoma.

I think that iridotomy or sphincterotomy is preferable to iridectomy or sphincterectomy for the following reasons:

1. The operation is easier and simpler to perform, consisting of one simple straight snip of the scissors held at right angles to the surface of the cornea.

2. The total length of the cut iris is less on account of the long U-shape of the iridectomy incision from which there is greater exudation and hemorrhage. The cut going directly to the periphery is also in a better position within the eye than a mere sphincterectomy.

3. Iridectomies as done before cataract extraction are usually not peripheral, and the peripheral portion of the iris tends to retain the lens, and afterward the fluid, behind it. When the incision extends through the width of the iris the lens and fluid are not retained behind it.

4. The coloboma is much narrower, a mere slit peripherally, than in an iridectomy and being altogether or almost covered by the upper lid, the patient is not subsequently dazzled so much by the light as after an iridectomy which leaves a broader coloboma.

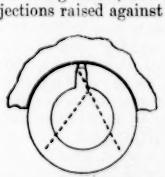
5. The shape and size of the coloboma, particularly the sharp edges at the pupillary margins, are well known, so that when the toilet of the eye is made it can be readily seen when the iris is completely within the eye. It is not always possible to know the exact size and shape of the piece of iris removed in an iridectomy, thus making it a little more difficult to know when the iris is properly straightened out within the eye.

Macnamara[17] in 1882 advocated the excision of a small peripheral piece of iris leaving the sphincter intact. Dr. Taylor of Nottingham removed a sufficiently large peripheral piece of iris to permit the egress of the lens. H. B. Chandler[18] reports 312 cases of cataract extraction with a small peripheral buttonhole in the iris. This latter method is no doubt better than a simple extraction, as the fluid can more readily pass from one chamber to another, and will not be so liable to dam up behind the iris and to cause its prolapse on sudden escape of fluid through the section. Since the buttonhole (if not made too large) will be covered by the upper lid after operation, there will be no apparent deformity of the iris due to the artificial coloboma as after iridectomy or sphincterotomy. I think, however, that sphincterotomy is to be preferred to this small peripheral buttonhole in the iris for the following reasons:

1. Without any personal experience with the latter, I should think it somewhat more difficult to do, even if the iris would need to be withdrawn less, since care would have to be exercised, not to make the opening too large and so have the lens pass through it instead of through the pupil, or such that it would catch and hold the edge of the lens. Some operators make the buttonhole after the expulsion of the lens.

2. There would not be such free communication between the chambers, and correspondingly greater danger of subsequent iris prolapse.

3. The sphincter being intact, this operation is open to most of the objections raised against the simple operation, e. g., stripping of the cortical substance from the lens, stretching and tearing of the sphincter and adjacent iris, increased hemorrhage, exudation and thickening, greater force required to expel the lens, with consequent greater danger to the suspensory ligament, prolapse of vitreous, etc.



This diagram represents position and size of the conjunctival flap, position of section in corneoscleral junction, and narrow coloboma after sphincterotomy, the dotted lines representing the two incisions in the capsule; the angular flaps, which curl up, lie on either side of the short dotted line; the lower flap having the sharper angle curls more out of the way than the other.

The next step in the operation is to perform a simple but efficient capsulotomy. The varieties of capsulotomy described are legion, but most of them are more or less impracticable because difficult, and some are even impossible to perform. It is more or less difficult to make horizontal incisions in the capsule and considerable dexterity is required to make some of the combinations of incisions described. A few operators, DeWecker, Eugene Smith,[19] remove a portion of the anterior capsule by means of capsule forceps. Knapp[20] states that dislocation of the lens with prolapse of the vitreous and its consequences are not unlikely accidents in removing the anterior capsule. Others follow Pagenstecher's method and remove the lens within the capsule. The

17. Macnamara: "Diseases of the Eye."
18. Chandler: Archives of Ophthalmology, January, 1904.
19. Smith: THE JOURNAL A. M. A., Sept. 26, 1891; also Am. Jour. Ophth., November, 1904.
20. Knapp: Am. Jour. Ophth., September, 1905.

anterior capsule may be so incised without removal that it will not obstruct the pupillary area or have anything to do with secondary cataract in this area, although, as in every method, some cortical matter is retained in the peripheral areas. Secondary cataract in the peripheral area is sometimes useful by partially blocking the entrance of light into the coloboma. Of course the posterior capsule is the one chiefly concerned in the production of secondary cataract in the pupillary area; deposits in the form of "pupillary membranes" sometimes form on the front of this capsule. A good sharp cystotome is necessary so that but two cuts will be needed in making the two incisions. More are unnecessary and will even be harmful, since then small strips of capsule are liable to lie in the corneal section preventing prompt healing, and therefore exposing the eye to greater danger of infection. The cystotome I use has no sharp points to catch anything; it has a blunt end so as not to injure the iris when pushed up under it, and a cutting knife edge that will cut either way and may be easily sharpened. The instrument is passed with its cutting edge backward, across the anterior chamber and for some distance under the distal portion of the iris, toward either side, usually the nasal. One straight cut is then made across the whole lens passing through the pupillary area about 1 mm. from the pupillary edge of the iris and into the coloboma made by the sphincterotomy so that this incision extends as nearly as possible throughout the whole anterior capsule, and not merely in its pupillary portion. If the peripheral portions which are thinnest are not cut, cortical masses are more liable to be retained within the capsule, and greater force is required to remove the lens from its capsule. The cystotome is then again passed under the distal portion of the iris, but on a different side from the one chosen before, and a second cut is made passing more nearly to the center of the pupillary space, and meeting the first incision at the beginning of the coloboma or proximal pupillary margin. This method of doing a capsulotomy is worthy of attention for the following reasons:

1. It is simple and easy to do.

2. There are no strips or tags of capsule that can possibly get into the corneal wound, especially if the incisions are so large and peripheral that the capsule will not be torn by the exit of the lens. Promiscuous and extensive laceration of the capsule is harmful because tags of capsule are sure to lie in the section and retard or prevent healing, causing an uneven irritable scar which may help later to cause iritis, especially as there will also be more posterior synechiæ.

3. The flaps of capsule will tend to roll up out of the pupillary area. The sharper the angle of the flap the farther it will roll out of the way; this has been considered in locating the position of the incisions. The thin sharp flap from below will roll considerably downward out of the way. The lateral flap will roll somewhat to the side and out of the pupillary area and the largest portion on the other side of the first straight incision will also retract slightly out of this area (some might prefer to divide this last portion by another oblique and similar incision). While all the flaps of capsule will retract from the pupillary area, none of them are so situated that they can get into the corneal wound.

After capsulotomy is completed the next step is to expel the lens. This is done in the usual fashion by making pressure toward the center of the eye by a spoon or spatula over the lower limbus, while another spatula very gently depresses the sclera at the corneoscleral junction. After the lens has passed one-half way through the section the lower spatula should follow it with less pressure on the eyeball. A very little stroking of the cornea may be indulged in to remove some of the larger particles of the cortical substance, but with many operators, I believe, it is usually better to use, with proper precautions, intraocular irrigation in removing blood, exudates, or cortical substance from the interior of the eye, and for this purpose, I prefer to use gently a slightly warm sterile boric acid or normal saline solution in a properly constructed gravity syringe. Great care should be used to prevent the retention of quantities of solutions within the eye sac.

This question of irrigation or lavage has been fully dealt with in many excellent papers by Reik,[21] Beard,[22] Bulson,[8] and Lippincott,[23] and does not need further commendation or elucidation here. I think that after its use, which should not be continued too long, capsular opacities are less frequent or at least less dense, so that secondary operations are not so frequently necessary. By its use, except in some sclerotic cases with no lens débris when it is not required, we can obtain a more nearly perfect technic and secure striking, often brilliant results. The patient is usually much encouraged by the better vision after syringing out the lenticular débris, and is stimulated to do his part toward obtaining a happy result. After the use of the irrigator the iris seems to contract better and sometimes assumes its proper position without any manipulation. McKeown claims that the tendency to subsequent prolapse of the iris is lessened, and this should be expected since retained cortical masses by their swelling tend to increase tension and possibly prevent smooth healing and coaptation of the wound margins. Since there is more complete elimination of débris and speedier closure of the sclerocorneal section, and since if micro-organisms have entered the eyeball, many of them will be washed out, sometimes so diminishing their number as to render them harmless, inflammation and infection are less liable to result. When the anterior chamber remains empty and the cornea shrunken, the corneal dome may be re-established and the lips of the incision brought into correct apposition, aiding rapid healing and restoring corneal curvature. It should sometimes be used to remove blood from the eye during the operation as after sphincterotomy and before capsulotomy is done.

After irrigation the toilet of the eye is completed. If the iris is not in its proper position as shown by a sharply defined coloboma, especially at its pupillary corners, a spatula should be used to place it in a correct position and to reduce the tags of capsule lying in the wound. I have always been able to do this without any difficulty, but it is possible that rarely a case might be found in which an iridectomy might be necessary if the iris could not be properly replaced within the eye. Next after a little mild irrigation of the incision, the conjunctival flap is gently folded back into position by a spatula, and smoothed out. Its surfaces are usually sticky and it readily and strongly adheres, undoubtedly assisting in the accurate coaptation of the lips of the incision which, therefore, heal more quickly and make infection correspondingly less likely. Dr. C. F. Clarke[9] claims that a conjunctival flap diminishes the amount of subsequent astigmatism. Earnest F. Maddox[24] advocates suturing the conjunctival flap. I doubt the pro-

21. Reik: Annals of Ophth., July, 1903.
22. Beard: Ophthalmic Record, April, 1905.
23. Lippincott: Ophthalmology, January, 1906.
24. Maddox: Ophthalmoscope, November, 1904.

priety of prolonging the operation by this procedure, not only because the flap adheres so strongly without suturing, but also because, as Melville Black[25] has pointed out, the eye must be prepared, anesthetized, and a speculum introduced in order to remove the sutures which also beget infection. Kalt proposed a corneal stitch inserted like a Lembert intestinal suture, before operation, the central loop being long and drawn out of the way during the operation, after the completion of which the ends are drawn taut and tied.

Finally, I usually instil one drop of one-half per cent. of eserin sulphate into the eye, as this amount will not irritate and will cause the sphincter to contract slightly and for some time, so that the iris will be less likely to prolapse. Fuchs,[11] Gibbons,[26] Jackson,[27] and many other authorities state that eserin lessens the danger of iris prolapse. Before the pupil dilates again some remnants of cortex or capsule in the pupillary space may become attached to the iris, and when the pupil dilates be drawn from the central pupillary area. A dry, sterile, double eye pad, made by sandwiching a little sterile absorbent cotton between a few layers of sterile gauze, is then lightly fastened usually over both eyes by strips of adhesive, which latter are not so easily disturbed during restlessness as a roller bandage, and which may be cut in removing the pad for the first few days.

In order that no pressure may be made on the eyelid of the eye operated on, the strips are placed over the margins of the eye pad and do not directly overlie this eyeball. For the first day or so they are tightly placed over the pad covering the eye not operated on, making some pressure and thus tending to prevent the opening of the eyelids. A dressing on both eyes sometimes causes mental depression or excitement in old people. For the first few days it is well to cover the eyes for protection with some style of ocular mask or shield, such as Ring's mask, being careful not to make thereby any pressure on the dressing or lids. I have not had any experience with the so-called open method of treating these cases advocated by Fuchs and other distinguished ophthalmologists, especially those abroad, who claim smoother and speedier healing with less frequent hernia of the iris.

Undoubtedly, postoperative astigmatism is influenced by a conjunctival flap, the size and location of the section, the sharpness of the knife, or by anything which influences healing, e. g., prolapse or incarceration of the iris, swelling or cortical débris, presence of capsule tags in the wound, muscular action of the lids and eye muscles, and especially by any pressure made by the lids on the eyeball due to the tension of the lids, and particularly that due to pressure from dressings and bandages. The pressure of the lids can not be diminished unless possibly by antispasmodics, but care can be exercised that little or no pressure is made on them. It can be readily understood, for example, that if the section lies in the upper corneoscleral junction, any pressure on the cornea would make the upper flap of the cornea slide upward, overriding the adjacent sclera. This would make the vertical meridian less curved, not only because the cornea in this meridian has become flattened but also because the upper edge of the cornea has been displaced forward on the sclera.

The cornea being a stiff structure, if it lengthens in one direction it must necessarily shorten in another, and this latter is what takes place in the horizontal meridian. Also the pressure made on the sclera, which projects forward in the rounding shape of the globe, pushes it backward and brings those anterior portions in the horizontal meridian closer together. Thus the curvature in the horizontal meridian is increased. Pressure on the sclera in the vertical meridian affects the limbus in this meridian exactly as in the horizontal, but the cornea and sclera not being joined together, the sclera merely slips under the cornea and does not pull the corneal margin with it as it does in the horizontal. The flattening in the vertical and increase of curvature in the horizontal meridian, are exactly what takes place after section of the eyeball above, and I think the chief cause is the degree of pressure made by the lids and by different dressings, which latter should be dispensed with at the earliest possible moment consistent with safety. The axis of the correcting cylinder is usually nearly parallel to a line joining the points of puncture and counterpuncture.

AFTER TREATMENT.

The patient is gently conveyed (carried) to his bed with as little muscular effort on his part as possible. The eye is inspected at the end of twenty-four hours and redressed with usually a single eye pad. This is done each day as long as necessary; the time varies from two or three days to a week or longer. In making these dressings I use only sterile normal saline or boric acid solutions, and never instill any collyria unless specifically indicated, as atropin in iritis, a mild form of which is nearly always present. After the use of a few drops of cocain several operators (Bulson[4]) when the wound has been securely closed for five or more days, instill three or four times a day for a period of four days, first a 5 per cent. and later a stronger solution of dionin, claiming that it increases the effect of atropin, assists in the treatment of iritis, and promotes the absorption of exudates in those cases which are at all affected by the drug. I have several times used a 5 per cent. solution of dionin as early as the third day without doing any harm, but am unable to state whether or not it was of any value.

The quiet of the patient for the first day or two is especially important. All physical exertion, coughing, vomiting, and hiccoughing should be guarded against. The patient should be made as comfortable as possible, should be informed about his surroundings and impressed with the necessity of quiet. For one day it is best, if possible, to have the patient lie quietly on his back or on the side opposite the eye operated on, without turning, and to permit movement of the arms and legs only. When necessary, the head may be made comfortable by the nurse, and after the first day the patient may turn in bed, if assisted by the nurse. I advise fluid or soft diet for at least two days, locked bowels for one or two days, and afterward, if necessary to prevent straining at stool, the use of mild laxatives and enemata. To reduce the discomfort following the normal amount of reaction and to diminish the pressure of the lids on the eyeball, I think it is well when not contraindicated for some particular reason and when it has been used previously without evil results, to give a hypodermic injection of morphia sulphate 1/8 or 1/4 gr. one hour before operating, which may be repeated every 3 or 4 hours if considerable discomfort continues. Dr. Eugene Smith[28] advises morphin hypodermically immediately after the operation because of its sedative and myotic action. The first

25. Black: Ophthalmic Record, February, 1905.
26. Gibbons: "The Eye, Its Refraction and Diseases."
27. Jackson: Philadelphia Med. Jour., May 11, 1901.

28. Smith: Knapp's Archives, 1894, p. 85; also, Am. Jour. Ophth., November, 1904.

night, if the patient is restless and can not sleep, a dose of some hypnotic may be given at bedtime. After explaining the reasons for it, it is sometimes advisable to tie the patient's hands to the foot of the bed by long strings, strong enough to wake him if any effort is made to reach the face, but not so strong as to frighten him by making him wonder what he would do in an emergency, such as fire. A simple way is to fasten the sleeves of the night gown to the bed clothes by small safety pins.

In conclusion, I wish to direct attention to the necessity of thorough examination and preparation of the patient, to the screens for the patient's and operators' breath and saliva, to the large, completely bordering conjunctival flap which is easily folded on the cornea, the method of obtaining it, the position and size of the sclerocorneal incision, where to grasp the iris when withdrawing it, the sphincterotomy and its advantages, the simple but efficient capsulotomy, the necessity of avoiding pressure on the lids and eyeball by the dressing, and the simple after treatment.

CATARACT EXTRACTION WITH MODIFIED IRIDOTOMY.*

F. H. VERHOEFF, A.M., M.D.
Pathologist and Assistant Ophthalmic Surgeon, Massachusetts Charitable Eye and Ear Infirmary.
BOSTON.

The following operation seems to possess advantages not offered by any other method of cataract extraction. While thus far it has been performed in only a few cases, it has given satisfactory results in all. More extended experience with it may, of course, bring to light unforeseen objections, but this is not anticipated.

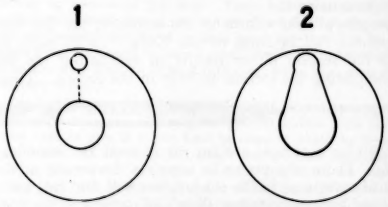
THE OPERATION.

The corneal incision is made in the usual manner, probably best at the limbus. The iris is then grasped with the iris forceps as near its root as possible and a small bit of tissue excised with scissors so as to leave a small hole in it (Fig. 1). The iris will immediately return to the anterior chamber of its own accord. De Wecker's small iris scissors, preferably with blunt pointed blades (Noyes' scissors will probably serve as well), are then introduced through the corneal incision, gently opened, and one blade passed downward through the hole in the iris until it projects below the pupillary margin. The blades are then quickly closed, thus making a clean cut through the iris to the pupil. Owing to the mydriasis produced by the cocain, the edges of the incision will separate, usually at once, as widely as after an ordinary iridectomy (Fig. 2). If, however, the iris is pressed against the cornea by the lens, this may not happen until after the lens has been extracted. The lens capsule may now be opened with the cystotome or capsule forceps and the lens expressed in the usual way, or the latter may be extracted in its capsule. In making the toilette of the wound care should be taken, as after an iridectomy, to free the pillars of the coloboma from the incision. It is probably best to instil atropin immediately after the operation, since this enlarges the coloboma and thus lessens the danger of iris prolapse.

ITS ADVANTAGES.

This operation offers the advantages of both the simple and combined operations without their disadvantages. The lens is removed with the same ease as in the combined operation, the danger of iris prolapse is minimized, and cortical matter can be expressed with even greater facility than after an iridectomy. Moreover, the modified iridotomy requires no such rough handling of the iris and causes no such pain as iridectomy, while it is superior to the latter in its cosmetic and optical results. The excision of iris tissue is made where it will be most effective in preventing iris prolapse and at the same time do the least damage from an optical standpoint. In the case of iridectomy, a large section of the sphincter muscle is always removed so that the reaction of the pupil to light is necessarily much impaired, whereas in this operation the sphincter muscle is simply incised and the pupillary reactions less interfered with. For this reason, as well as on account of the narrow coloboma finally obtained, the dazzling on exposure to bright light often complained of after iridectomy is after this method notably absent. The optical results are, in fact, practically as good as after the simple extraction or the Chandler buttonhole operation.

Objection may be raised to the introduction of an additional instrument into the eye. It would seem, however, that the danger of infection or traumatic inflammation must be less from the introduction of a sterile instrument into the anterior chamber than from the trauma to which the iris is subjected in ordinary iridectomy.



There are two questions in connection with the operation which probably can be answered only after further experience with it. One is the question as to the best situation for the corneal incision, and the other as to the proper size of the hole in the iris. I have always made the incision at the limbus, because this must unquestionably give the best optical results. An incision here, however, is apt to be attended with considerable bleeding, which, with the conjunctival flap, may obstruct the view and thus render the operation more difficult. In regard to the size of the hole in the iris, I have made it as small as possible, but the danger of iris prolapse would no doubt be still further reduced if it were made comparatively large. In any case it should not, of course, be made so large as to remain uncovered by the upper lid.

* Read in the Section on Ophthalmology of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

Massage as Adjuvant in Treatment of Stricture of the Urethra.—A. Settier calls attention to the frequent spastic contraction accompanying urethral stricture, and recommends supplementing surgical measures with inunction of an ointment and massage. In his communication to the *Siglo Medico*, liii, 817, 1906, he states that he uses an ointment to promote absorption composed of 4 gm. potassium iodid and 15 gm. each of lanolin and cold cream. A piece of the ointment about as large as a cherry is massaged into the part corresponding to the stricture, increasing from gentle manipulations at first until so strong that the patient finds them painful. He repeats this daily, and has found it extremely useful as an adjuvant measure with surgical measures, dilatation or the like.

THE USE OF THE SECONDARY CATARACT KNIFE.*

MELVILLE BLACK, M.D.
Professor of Ophthalmology in the Denver and Gross School of Medicine.
DENVER.

The use of a knife for enlarging and completing the section in cataract extraction was popular with Mackenzie when he published his "Treatise on the Eye" some fifty years ago. I can not find that the subject has received any attention during recent years except in an article of mine[1] in which I failed to credit Mackenzie with his work because I was unaware of it until Dr. Oscar Wilkinson called my attention to it.

It is not my intention to claim any priority in the use of the secondary knife, notwithstanding my knife differs somewhat from any before in use, as well as does my method of using it.

This knife was made for me by Tiemann and has served me so well that I have found no reason for modifying it in any way. I should now feel that my armamentarium was incomplete without it, hence it is always laid out with my other instruments when preparing to do a cataract extraction. If the section is satisfactory in every way it is not needed, but if the section is not large enough or if the iris falls in front of the knife before the section is completed it is invaluable. I feel sure that I have materially improved my cosmetic results since I have been using it.

Despite all our efforts to the contrary, the iris does sometimes fall in front of the knife. To go right on with the section either results in mutilating the iris or completing the section entirely in the cornea. Those

who prefer a corneal section rarely need the secondary knife. Those who prefer to complete the section at the corneal margin or in the conjunctiva will find this knife will enable them to follow their inclinations in the matter.

If the anterior chamber is evacuated by the patient making a sudden movement before the counterpuncture has been made, the knife is withdrawn and the probe point of the secondary knife introduced through the wound into the anterior chamber to a point at about its summit, when it will be found that the section can be made with ease by cutting, with but little sawing movement, at the same time extending the point of the knife around the anterior chamber at the base of the iris until the section is large enough for the removal of the lens.

If, after puncture and counterpuncture, the iris falls in front of the knife, withdraw the knife, remove the speculum and wait a few moments until a little aqueous has formed in the anterior chamber, then replace the speculum and fixation forceps and introduce the point of the secondary knife into the anterior chamber, working over the iris to the summit of the chamber and thence downward, pushing the iris back of the knife until the point passes through the counterpuncture. It will now be found that the iris is held taut by the knife and that the margin of the pupil is back of the knife, and by making a direct traction cut without sawing movements the section can be completed at the corneal margin or in the conjunctiva without mutilation of the iris.

If it is found on pressure and counter pressure that the section is too small for the escape of the lens without unduly bruising the iris it is a very simple matter to enlarge the angles of the wound with the secondary knife.

In a successful cataract extraction obstacles are promptly met and overcome and the operation is completed in the manner planned. Too small a wound demands that it be enlarged or that an iridectomy be performed. A mutilated iris evidences a partial failure, from a cosmetic standpoint surely, and possibly from a visual standpoint as well. Evacuation of the anterior chamber before the counterpuncture is made generally means that the operation should be postponed. I have never yet failed to overcome successfully the obstacles mentioned by the use of the secondary knife. I feel sure that if it is always laid out with the instruments for cataract extraction it will not be long until use is found for it. After once having been used I believe it will become indispensable.

DISCUSSION

ON PAPERS OF DRS. TODD,* STEVENSON, VERHOEFF AND BLACK.

DR. M. WEINER, St. Louis, said that he does not believe that the ripening operation has a place now except in exceptional cases. The extraction of the lens in the capsule, he believes, is the better operation. Major Smith, of India, by a large number of operations, proved that there is but little more danger in extraction by this method than by opening the capsule and he has reported so far 9,000 cases. In the last 2,600 cases he has employed iridectomy, which in Dr. Weiner's opinion is safer. Dr. Weiner has done eighteen with no absolute failure and only one bad result, which was not the fault of the operation. He advocated extraction of the lens in the capsule for immature contract.

DR. ALBERT E. BULSON, JR., Ft. Wayne, Ind., said that in senile cataract the patient is practically blind and desires useful vision with the least possible risk. Patients in good physical condition have the best chance for a successful operation, but those with constitutional diseases should not be denied cataract extraction, after due warning, as the results in such cases are often up to the average. In uncomplicated cases, if imperfect vision impedes business patients should be operated on, even though the cataract is not ripe, provided that the lens is not in the stage of swelling and that there are no other contraindications. The possibility of postoperative iritis or increased demands for a subsequent discission should not deter one from operating on immature senile cataract. Dr. Bulson said, as results in such cases have been fully as good as after extraction of mature cataract. Dr. Bulson said that the preoperative attention and precautions recommended by Dr. Stevenson are excellent theoretically, but in practice are apt to increase the anxiety of the patient. If the eye is free from discharge and congestion and remains so for from 24 to 36 hours, while the patient is being prepared for operation by laxatives, baths, etc., it is in good condition for operation. As an added precaution the microscopic findings in a smear from the conjunctiva, taken just before the final cleansing, may be considered. In the absence of discharge, Dr. Bulson considers prolonged cleansing with antiseptics superfluous. More attention, he said, should be paid to sterilization of the skin and surrounding parts, particularly the eye lashes. He stated that he believes that Knapp is right in saying: "It is better for the patient to be operated on in the afternoon." Dr. Bulson said that artificial light condensed and thrown into the eye by an assistant gives a steady illumination which is under the control of the operator. The position of the operator and the hand to use is a matter which the operator must decide in a manner which will give the best results.

Two drops of a 4 or 5 per cent. solution of cocain dropped into the eye every five minutes for three times, is suffi-

* Read in the Section on Ophthalmology of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

1. Ophthalmic Record, February, 1904.

* Dr. Todd's paper is in THE JOURNAL, March 9.

cient, Dr. Bulson said, to produce all the anesthesia required for the corneal section and conjunctival flap. Any more is apt to produce softening of the cornea and collapse after the section has been made. Subconjunctival injections of cocain and adrenalin in his experience have no advantages. One local application of adrenalin is sufficient to check hemorrhage from the conjunctival flap. It has been his custom to place a drop of sterile cocain solution on the iris after corneal section. Except when it can be determined that the lens is sclerosed, or will come out without leaving more or less soft cortical substance, Dr. Bulson prefers a rather large iridectomy, as it facilitates extraction of the lens, makes removal of soft cortical substance by irrigation easier, and has a decided tendency to prevent both prolapse of iris and postoperative glaucoma. The large coloboma, extending to the root of the iris, is usually covered in a large measure by the upper eyelid, and patients seldom complain on account of the cosmetic appearance or dazzling effect by light. Theoretically, the capsulotomy is simple but efficient. Dr. Bulson prefers a capsulotomy in which no flap of capsule will have a tendency to curl toward the visual center, with its possibility of interfering with vision through retention of cortical material within its folds. For the removal of cortical material there is nothing, he said, which equals irrigation, and it should be preferred to stroking or any other manipulations, but the irrigation should be gentle and not too prolonged. An irrigator, whereby fluid flows by gravity only, is the safest, and therefore, the best appliance for use in washing the anterior chamber. For promoting resorption of the soft sticky cortical débris which irrigation fails to remove, dionin, he said, is sometimes useful. It should not be used earlier than the fourth or fifth day for fear of reopening of the wound.

The application of 1 to 5,000 bichlorid vaselin to the eyeball as a final part of the operation is worthy of adoption. It keeps the wound covered with an antiseptic, and lubricates the lid edges so that secretions readily pass out to be absorbed by the dressings. A light dressing that does not press on the eyeball is all that is required after cataract extraction, and a light but stiff pasteboard mask to protect the eyeball. Idiosyncracy to drugs, such as atropin, should be inquired for, and it is advisable to give alcoholics and smokers a limited allowance of these narcotics to prevent undue nervousness. So far as the eye is concerned, the patient may sit up on the second day. Dr. Bulson extends the time somewhat during which the eye operated on is covered, as he thinks too early exposure of the eye, with the attending attempt on the part of the patient to see, is a prolific source of mild irritative fundus lesions.

DR. ALLEN GREENWOOD, Boston, said that the operation as described by Dr. Verhoeff is an extension of the buttonhole operation devised by Dr. Chandler to prevent iris prolapse, and by its cutting of the bridge of iris tissue between the buttonhole and the pupil practically converts the Chandler operation into a very narrow iridectomy. This adds to the advantage of the buttonhole operation a greater facility of removing the lens and cortical débris. The narrow coloboma produced by this operation must reduce to a minimum the disturbances produced by the excessive light in the eye, often complained of as following the ordinary iridectomy and must be of value on this account. The ordinary combined operation is chosen, by men who use both the simple and combined methods, in cases in which there is a large lens, a shallow anterior chamber and a sluggish iris. Given such a case it seems to Dr. Greenwood that the making of a buttonhole, followed by the crowding in of a pair of scissor blades with the necessity of pushing back the lens with the deeper blade would cause fully as much disturbance to the iris and pain to the patient as a small, well performed iridectomy and calls for two operations on the iris, with the danger of injuring Descemet's membrane. In doing the combined operation he tries to make the iridectomy as narrow as possible. It is possible to do this so that the sphincter is barely divided or a thread-like bridge of sphincter be left. It is an open question whether a narrow iridectomy will not answer better, with its single introduction of a pair of iris forceps, than the modified iridotomy, with its introduction of a pair of scissor blades following a buttonhole iridectomy. Dr. Greenwood said he could not agree with Dr. Verhoeff's statement that his procedure offers the advantages of the simple operation without its disadvantages. Any division of the sphincter of the iris must impair its function and any cutting of the iris must be an added traumatism to the eye. The objection to the simple operation is the danger of iris prolapse, but neither an iridotomy nor an iridectomy will wholly prevent some entanglement of iris tissue in the corneal wound. During the past two years Dr. Greenwood has had no case of iris prolapse when he has done simple extraction, and this he ascribed largely to the use of intraocular irrigation in all cases. The hemorrhage which Dr. Verhoeff complains of from a section at the limbus can be largely prevented by the use of a weak solution of some of the suprarenal gland extracts. Dr. Greenwood said that while Dr. Verhoeff's operation combines some of the advantages of the simple and of the combined operations, it is not true that it has all the advantages and none of the disadvantages; in many cases it would not be applicable. He stated that in the cases requiring an iridectomy he should prefer a narrow iridectomy to the modified iridotomy, except possibly in cases of immature cataract. In the extraction of cataract when the sight of the patient is at stake, Dr. Greenwood feels conservative surgeons will be loth to abandon so successful an operation as the ordinary combined extraction for one which requires the introduction of a pair of scissors within the eyeball of a conscious patient in addition to the usual operative procedures.

DR. CASEY A. WOOD, Chicago, suggested the further use of this probe-pointed knife. He fancies that the falling of the iris over the blade of the knife is not more common than the mistake he has seen made, and once made himself, of turning the blade of the knife down and finding that it would not cut its way up because of the error. There is no reason why this probe-pointed knife should not be introduced through the wound and the incision completed in that way, nor would it be any worse than to attempt to turn a small Graefe knife 180 degrees, as he has seen done, to make a better cut when that same error has been made.

DR. L. WEBSTER FOX, Philadelphia, said that a year ago Dr. Black sent him one of his probe-pointed knives with the request that he give it a fair trial in cases in which he found it applicable. At the time Dr. Black devised this knife for enlarging the wound in simple cataract operations he was not aware that both Wharton Jones in 1847 (page 252) and Mackenzie in 1854 (page 795, fig. 84) not only described, but illustrated in their works on the eye knives used for the same purpose. At that time, however, the narrow bladed von Graefe knife was not in use and the knives devised for enlarging the wound were manipulated in a different manner from that suggested by Dr. Black. Dr. Fox finds these knives most useful in enlarging the wound in glaucoma operations, or in enlarging the wound in secondary cataracts, when necessary. He is not an advocate of the simple operation, except in very well selected cases. The incisions in cataract operations have never been described as carefully as they should be in our text-books. There are many different incisions, commencing with Liebrich in the lower half of the cornea, and ending with von Graefe in the upper part of the eyeball. The proper beginning of an incision, Dr. Fox thinks, is the first step toward its successful termination. A Beer's or Sichel's knife will make an old style flap if made directly parallel with the corneo-scleral margin, starting usually a little above the horizontal plane of the eyeball. By some dexterity of manipulation a flap is made by which the lens is easily delivered. Ophthalmic surgeons in performing any cataract incision must bear in mind the proportions of the dimensions of the lens in relation to the inner circle of the cornea or to the opening wished for. It is necessary, therefore, when using the narrow-bladed knife to have the cutting edge at right angles to the horizontal diameter of the cornea; the blade should be started as if it were passing downward to the center of the pupil toward the point of the nose, or at about an angle of 60 degrees, then rotating the point of the blade upwards, making a counter puncture opposite the point of puncture. When the diameter of the cornea is small, the anterior chamber shallow, the iris pushing forward with possibly an enlarged lens behind, it would be almost impossible to perform the simple operation

without more or less of the iris becoming involved on the cutting edge of the knife—this must be avoided as described by both Wharton Jones and Mackenzie. Dr. Fox prefers the combined operation. When he wishes to perform a simple operation he carefully selects an eye with a deep anterior chamber, large cornea, and prompt reaction of the iris to light. The knife devised by Dr. Black, he said, will be a most useful addition to our armamentarium, for its usefulness is not limited to the field to which Dr. Black assigned it.

DR. OSCAR WILKINSON, Washington, said that Dr. F. Bischoff, London, in 1793, in his book, "A Treatise on the Extraction of Cataract," speaks of a blunt pointed knife in cataract operation. On page 52 he describes how to avoid injuring the iris when it happens to fall in front of the knife as he is making the incision.

DR. WENDELL REBER, Philadelphia, declared that the first thing to be considered is the welfare of the patient and not the brilliancy of the operation. It is our duty to view the majority of cataractous eyes as sick eyes and for this reason Dr. Reber thinks it wise in these cases to do a preliminary iridectomy (not a ripening operation). The objections of course are well known.

As to Major Smith's operation, Dr. Reber determined ten years ago to try this very operation. He did it four times. When it succeeds the results are beautiful beyond words; when it does not, the result is abyssmally awful. Three cases were perfect in their results. The other patient is wearing a glass eye and Dr. Reber was so intimidated by this high relative failure that he abandoned the operation. Whether or not we do an iridectomy, he thinks that we will do well to consider the matter of delivering the lens in its capsule. He has devised a 12 mm. watch crystal of the same curve as the cornea which may be put over the cornea when there is vitreous prolapse of a moderate character, permitting one to inspect the cornea and prolapsed iris through it, and to introduce a corneal stitch if it is thought necessary.

DR. S. L. LEDBETTER, Birmingham, Ala., stated that a few years ago a case of eye instruments that had belonged to an old physician who had died a few years before was given to him and in it was a knife that corresponds closely to the one Dr. Black uses. Dr. Ledbetter did not know what the knife was for until he read the article. Since then he has used it twice and it worked very well.

DR. S. LEWIS ZIEGLER, Philadelphia, said that the older operators probably all favor preliminary iridectomy. He has often heard Dr. Harlan say he would want it done on his own eye if he had to have a cataract extraction. Dr. Ziegler thinks it is going out of date. If the capsular incision is done in a free manner there is no danger of retained cortical matter. As to iridectomy, if we are going to do one, the key-hole iridectomy is the best. The iris should be grasped at the margin, drawn out and cut off. It can be cut wide or narrow, according to the amount of iris grasped in the forceps. The edges of the coloboma should be carefully dressed back into position. If the conjunctival flap be small it is very well, but if large there is apt to be a portion that remains unattached after healing. If the aqueous leaks out under this, it resembles chemosis. This may heal slowly and give a high degree of astigmatism. Dr. Ziegler thinks that Dr. Black's knife is useful, although not new. In regard to the iris working over the edge of the knife he thinks that a little manipulative skill can generally make it float back. If the knife be raised directly up, keeping it on the same plane, the iris will slip right off. He has never had occasion to use a supplementary knife. In glaucoma, where pressure throws the aqueous out, the iris is most liable to prolapse over the knife.

DR. A. R. BAKER, Cleveland, said that we all have to learn by experience. Most ophthalmologists have tried the ripening operation and have abandoned it, and he thinks that when it is the general consensus of opinion that one operation is not so good as another there is probably some good reason for it.

DR. C. W. HAWLEY, Chicago, said that he believes that in Chicago he was among the first to attempt cataract ripening. He did the operation according to Beckman's instructions and was pleased with the results. There was one case in which he lost the eye completely from panophthalmitis later, but this was not due to the operation itself. He had selected an old rheumatic man, and, of course, that is a serious matter. In every other case it was successful. Dr. Hawley takes a spatula and rubs it over the entire surface of the lens and in from four to six weeks he removed the cataract. He has now on hand a patient on whom he will perform ripening of one lens. Both eyes are affected and it is necessary to do something to allow the man to continue his work. He would not attempt to extract in the capsule. As to iridotomy in cataract extraction he has tried once or twice a suggestion given to him by Dr. Starkey. Instead of doing an iridectomy he suggested making a partial incision at the pupil and removing a little button of the iris. It takes away the tension of the iris at the pupil and leaves almost the entire iris for protection from light.

DR. W. B. MARPLE, New York, in reference to inserting the knife upside down, stated that he remembers hearing Dr. Knapp say that this had occurred to him twice and he had had no difficulty in revolving his knife 180 degrees. On one occasion Dr. Marple did the same thing and had no difficulty in turning the knife and finishing the operation. He would prefer this to inserting a second knife.

DR. E. E. JACK, Boston, said that in the last few months he has done extraction in the capsule nine or ten times. None of the cases have been failures; all have been fairly good, four or five very good. One danger that has not been spoken of is that after the eyes are bandaged there is a great tendency of the iris to prolapse, there being practically nothing to keep the vitreous from bulging against the wound and making it gape. This prolapse occurred in one or two of the cases. One of these cases, he said, is worthy of especial mention; that of a man of fifty years of age with congenital cataract, never operated on. A few weeks before Dr. Jack had performed an iridectomy and massaged the anterior capsule without effect. He then tried extraction in capsule, which succeeded only after half an hour of patient work. The result was good.

DR. R. D. GIBSON, Youngstown, Ohio, said that the irrigating fluid employed should be the physiologic saline solution. When we speak of normal salt solution we should remember that it is eight times as strong as the physiologic saline solution. He has found that internes sometimes make mistakes in this respect. Dr. Gibson stated that some time ago he wanted to irrigate the anterior chamber and did not have an irrigator with him and had to use an ordinary medicine dropper. He drew out the point in the flame of an alcohol lamp and rounded it off.

DR. T. J. MCCOY, Los Angeles, in reference to Dr. Stevenson's paper, said that some weeks ago, while doing an extraction, he grasped the iris midway between the limbus and peripheral margin and as he clipped it off he found that he had made a complete hole and had to reintroduce the forceps to get the sphincter. He suggested that it should be grasped much nearer the pupillary margin.

DR. E. E. HOLT, Portland, Me., declared that, after all, the largest element in any operation is the operator himself and he must adopt that method which seems best adapted to himself and to each individual case. In the preparation of the patient, Dr. Holt uses antiseptics about the eyes, nose, and face of the patient for several days before the operation, which he likes to have come off as quickly as possible. He has given bromid of sodium and morphin to patients with great satisfaction. He was led to the use of morphin as part of the preparation of a patient for cataract operations from an observation made about twenty years ago. He had a patient who was addicted to the use of morphin. She was unable to read ordinary type and led an unhappy life. It was to change this condition of things that she had sought advice from several oculists, all of whom discouraged an operation on her eyes. After careful preparation Dr. Holt removed the cataractous lens from one eye without iridectomy. There was no reaction from the operation. Her ability to read again changed the whole aspect of her life. He prefers to have the patient in the bed in which he is to remain after operation, with the head of the bed made up at the foot, so that he can stand behind the patient. He makes definite calculations to place the incision in the cornea so that the axis of the resulting astigmatism of the cornea will be exactly horizontal, as thereby he is sure that he gets better results from the manipulations necessary to remove the lens at

the time of the operation, and also better visual results for the patient. He seldom does an iridectomy, for he believes that the less traumatism inflicted, other things being equal, the better it will be for all concerned. After he has completed the incision in the cornea he aims to open the capsule of the lens by a curved incision near its periphery, following the outline of the margin of the pupil. He then removes the fixation forceps, leaving the eye free. It is of the highest importance for the operator so to place his spatula on the cornea in an eye without iridectomy, that the first movement of the lens will be to tilt it forward, so that it will clear the upper margin of the iris and its upper edge come forward into the anterior chamber of the eye. By so doing, the lens will come out readily and there will be little need of irrigating the eye after the expulsion of the lens. Years ago he used irrigation a good deal, but by studying the causes which necessitated its use and removing them, he seldom finds it necessary to use irrigation after a cataract operation. He also practiced the operation of ripening cataract and preliminary iridectomy, but now seldom does either.

DR. MARK D. STEVENSON, Akron, Ohio, said that the eye sac is cleansed more easily, better, and with less discomfort to the patient, by means of an eye bath and a sterile, unirritating solution than by any other method. Dr. Stevenson prefers to have very simple anesthesia and has not seen any harm result from 4, 5 and 6 installations of 4 per cent. cocain and 1 or 2 of adrenalin chlorid. After making the section and turning the flap back on the cornea, he often places another drop of cocain on the wound before touching the iris. If the corneal dome should sink, irrigate. If the iris is grasped a little beyond the middle of its anterior surface and sufficiently withdrawn so that its pupillary margin lies just outside the wound, there is no danger of making a buttonhole in it which would later have to be connected with the pupil, as in Dr. Verhoeff's operation. The method of seizing and cutting the iris is the simplest possible and requires little time. No iris tissue is removed, so that no care need be exercised as to how much, which must be carefully watched on other operations. It would seem best not to remove any of the sphincter, as it helps to hold the iris tissue from prolapsing, even when divided, especially if eserin is employed. The buttonhole operation requires great care and nicety not to remove too much iris at the base, which is apt to be torn while withdrawing it. In attempting to unite this buttonhole to the pupil, two blades of a pair of scissors would have to be passed on either side of the iris tissue, one blade through the buttonhole and then between the iris and lens on which it lies (into the anterior capsule of which it is liable to pierce, if sharp, and possibly to dislocate the lens) to beyond the pupillary margin, the other blade in the anterior chamber between the iris and cornea, the junction of the blades lying vertically nearly in the corneal section, widely opening it.

DR. F. H. VERHOEFF, Boston, referring to the fact that Dr. Greenwood took exception to his statement that this operation offers the advantages of both the simple and the combined operations without their disadvantages, stated that these terms, however, are purely relative and he thinks his further statements show that he does not claim too much for the operation. If blunt-pointed scissors are used there is little danger of injuring Descemet's membrane. In fact, it is not necessary for the scissors to come in contact with the membrane. As to pain, there is no pain connected with the operation. As to Dr. Greenwood's statement that a small iridectomy would be better, Dr. Verhoeff thinks it might be almost as satisfactory if one could always get an ideal iridectomy, but this is largely a matter of luck. An iridectomy lacks the precision of this operation. He has found the operation useful in extracting the lens in capsule cases of immature cataract.

Arsenic in Phthisis.—Dr. George F. Butler (*Chicago Medical Recorder*) states that in certain forms of pulmonary tuberculosis arsenic is superior to any other remedy. It is useful,, however, only in conditions characterized by excessive expectoration and a slow degenerative process. It is contraindicated when the cough is harsh and paroxysmal, with scanty expectoration and a tendency to hemorrhage.

THE PRINCIPLES AND MECHANICS OF ABDOMINAL DRAINAGE.*

ROBERT C. COFFEY, M.D.
Surgeon and Medical Director of North Pacific Sanatorium.
PORTLAND, OREGON.

Two notably scientific papers have been published in this country which have dealt somewhat with this phase of the subject of abdominal drainage. One was published by Dr. John G. Clark[1] and the other by Dr. John L. Yates.[2] Many other papers on the subject have been published, but these cover most of the ground and furnish us with all the fundamental principles so far developed either by original work or reference to the work of others.

Clark demonstrated that fluids and solids may pass through the endothelial layer of the peritoneum, fluids in many places, the solid particles only through the spaces of the diaphragm. He found the diaphragmatic portion of the peritoneum capable of absorbing much gross material. He found, too, by autopsy and on the living patient that the drainage tract, no matter what material was used, always contained organisms of some kind. He also proved that there was frequently fluid

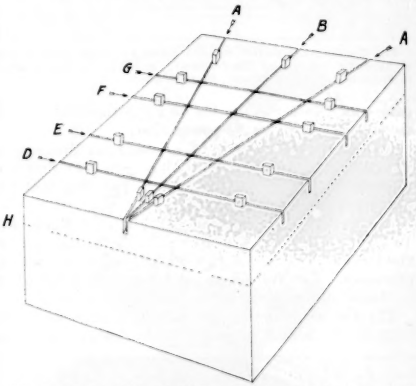


Fig. 1.—Plaster block containing cast of abdomen: A, A, right and left drainage lines; B, median section; G, through upper end of kidney; F, through lower end of kidney; E, through appendix; H, horizontal section.

pent up in the drainage cavity, which was sometimes forced into the general cavity, producing peritonitis, and that in many cases in which drainage was used, a sinus persisted six months and more.

Basing his reasoning on these facts, he condemns external peritoneal drainage in most cases and advocates postural drainage into the lymphatic system by elevating the foot of the bed twenty degrees, thus throwing the fluid against the diaphragm where it may be absorbed by the large open lymphatics.

Yates, in his article on "Local Effects of Peritoneal Drainage" confirms the findings of previous investigators and makes the results more definite by his experiments. The experiments were with all forms of

* The technical methods of drainage have been purposely omitted.

* Read before the Western Surgical and Gynecological Society, Salt Lake City, Aug. 31, 1906.

1. Jour. of Obstet. and Dis. of Women and Children, April and May, 1897.

2. Surg., Gyn. and Obst., December, 1905.

drainage, and by using many dogs he was able to definitely determine the time at which drainage from the peritoneal cavity ceases. By placing different forms of drains in the flanks of dogs and then in a certain number of hours filling the abdomen through an opening at the ensiform cartilage with carmine solution, he was able to determine definitely that all forms of drains were closed, so that absolutely no drainage from the peritoneal cavity would take place after six hours.

By quotations from many investigators and experiments of his own he concludes that drainage produces a flow of serum (lasting from a few hours to two days), which in quantity is out of all proportion to the fluid in the cavity to be drained, but in exact proportion to the amount of drainage material inserted, showing that the serum was poured out as a result of the irritation produced by the drains. From the work of other investi-

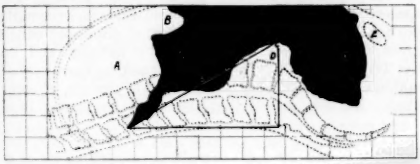


Fig. 2.—Diagonal section through pelvis and right flank at base of appendix (shown by black space): A, liver; B, gall bladder; C, appendix; D, psoas muscle; E, pubic bone.

gators and confirmed by his own experiments, he finds that gauze will not drain pus or blood.

Acting on these facts he also condemns drainage of the peritoneum, as a rule, on the grounds, (1) that it is impossible; (2), that it is depleting; and (3), that pus and blood are not drained.

I believe that the scientific findings of Clark and Yates are correct and fundamental as far as they go, but should be studied in connection with other mechanical principles. The two mechanical principles involved in peritoneal drainage are gravity and capillarity.

The two steps in the process of drainage are, first, bringing the fluid in contact with the drain; second, de-

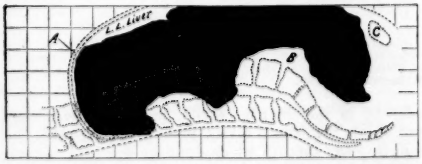


Fig. 3.—Diagonal section through pelvis and left flank (shown by black space): A, diaphram; B, psoas muscle; C, pubic bone.

livery of the fluid to the surface. Gravity performs the first step in all intraperitoneal drainage and, when postural methods are applicable, may also be made to perform the second. When the point of delivery is higher than the lowest point in the cavity to be drained, capillarity is necessary.

Gravity drainage may be executed by means of a tube or any other agent that will maintain a patulous opening. A tube does not always completely drain owing to the sucking into its opening of intestines and omentum, as shown by Mikulicz. Two or more parallel tubes bound together, work better, for in this way both capillarity and tubular drainage is brought to bear, making it more difficult to block. Capillary drainage is usually carried out by means of gauze which may or may not be encased in some smooth tube or tissue.

By experiment it is found that ten gauze wicks will drain exactly ten times as fast as one over the edge of a basin or out of a cavity. Therefore drainage will be in exact proportion to the amount of gauze passing through the external wound. In draining water over the edge of a basin the flow ceases when the water reaches the level of the outside end of the gauze, but starts again if a piece of gauze is pinned to the end of the drain and flows with a rapidity proportionate to the length of the external gauze below the level of the fluid in the basin, thus acting on the principle of a siphon. Gauze drainage must therefore be brought in contact with dressings or other absorbent substance if drainage is to be effectual. The same applies when the gauze is encased, in that the end of the gauze must be in contact with dressings.

My findings, both experimentally and clinically, confirm the conclusion of Yates and others that gauze will not drain pus or blood from a basin, nor from a closed abscess cavity. It will, however, drain either pus or blood from the free peritoneal cavity. Even coagulated blood or thick pus is liquefied by the excessive flow of serum (noted by Yates as being useless and depleting) and is delivered to the surface in the form of a thin red non-coagulable fluid in the case of blood, and a yellow fluid in the case of pus, which will frequently saturate

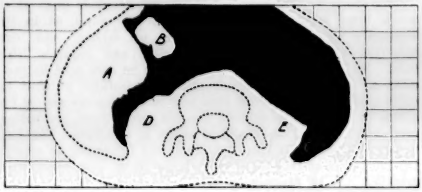


Fig. 4.—Cross section at upper end of kidney (shown by black space): A, liver; B, gall bladder; C, colon; D, right kidney; E, left kidney.

the dressings and all the bedding in a short ime, if the drainage is sufficient in quantity and properly placed.

Thus this seemingly useless flow of fluid serves the purpose of a solvent, and at the same time acts as an irrigator from within, out, in a manner impossible by artificial irrigation. Gauze packed in a cavity like the "folds of a fan" as described by Clark, creates a flow of serum in proportion to the amount of gauze in the abdominal cavity, but serum is delivered to the surface only in proportion to the size of the strip passing out through the wound. Hence the large secretion of serum, and later of pus, surrounding the drain (mentioned by Clark), which was not delivered because of the insufficient drainage at the outlet and which later produced a chronic fistula because the internal cavity was larger than its outlet. This is aptly illustrated by the formation of a fistula following the improper opening and subsequent treatment of an ischiorectal abscess.

Gauze forms a splendid frame work in the formation of a protecting wall and an effective drain when in large enough quantities to prevent its being choked by granulations from the sides of the wound. Any attempt to remove gauze prior to the fifth or sixth day is dangerous, as shown by Clark, who reported eight out of one hundred cases in which intestines were drawn out through the wound and others in which walls were

broken down so that infection occurred. Force should never be used in the removal of gauze, as it will almost always be loosened from the sixth to the fourteenth day by natural processes. By this time a definite wall is formed and there is no danger of breaking open the cavity. Much of this difficulty is relieved by covering the gauze with protective tissue or split rubber tubes. One of the most effective and popular drains is in the use of a number of split tubes or cigarette drains side by side, thus producing a double capillary action.

The postural drainage advised by Clark is effective, even to the danger point, as is shown by the enormous number of tube casts thrown off in a septic case following the rupture of an appendiceal abscess into the right flank, indicating an overwhelming of the kidney. The modern tendency is to remove the fluid as far from the diaphragm as is possible in order to avoid the very thing that Clark was trying to accomplish. Fowler therefore recommended the elevation of the head of the bed from eight to fourteen inches to drain the fluids into the pelvis. Kelley recommends elevation of the body to an angle of thirty degrees for the Fowler position. Others have recommended still more elevation of the upper extremities.

I was early struck with the fact that either flank holds more fluid than the pelvis when the subject is lying perfectly level on the back. I experimented with several cadavers containing all the abdominal viscera and found that in order to drain the fluid from the flanks into the

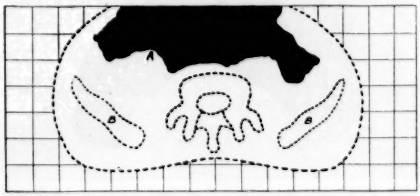


Fig. 5.—Cross section at base of appendix (shown by black space); A, appendix; B, B, ilium.

pelvis, the body must be elevated to an angle of sixty or seventy degrees, instead of thirty, but I was unable to determine accurately the degree necessary for drainage.

I took, therefore, the body of a man who had died of pneumonia, weighing about 140 pounds, height five feet eight inches, and removed the front of the abdominal wall. I then removed the stomach and all the intestines except the cecum and the appendix. The liver, gall bladder, kidneys, ureter and bladder were left and a string was pinned along the course of the ureter so as to make it prominent in the plaster cast. The body was made perfectly level and the cavity was filled with a liquid plaster-of-Paris so that it made a smooth, level surface. Two days later the body was cut off from the cast, the cast dried and painted with iodin to give it color, and covered with several coats of shellac to make a line of cleavage. The flat or abdominal side of the cast was then placed on the bottom of a box so that the highest points of the cast were represented by the deepest points in the flanks and an inch of liquid plaster-of-Paris was poured in around the cast, at which time the stakes shown in Figure 1 were set to mark the lines for sawing, after the cast had dried. On the right side, a line was made which would pass through the deepest points of the flanks, pass through the base of the appendix, and through the pelvis. A corresponding line was made on the left side; a cross line was made to pass through the appendix transversely, and another through the upper poles of the kidney, and still another through the lower poles of the kidney. The box was then filled with plaster, making a block 7x16x18 inches. This was dried, and when it was dry I sawed through each line. As each section was made, a draftsman was present to make an accurate tracing of the cavity, which is shown in the pictures in solid black. The plaster is checked off in spaces of one inch for the purpose of estimating angles. By these pictures it will be seen that with the subject on its back the flanks are more than one inch deeper than the pelvis, and that in order to bring the lowest point in the flank on a level with the psoas muscle, which forms the dividing line between the flank and the pelvis, the upper end must be elevated to an angle of fifty-one degrees, and, in order to drain properly, it would probably have to be raised to an angle of sixty to seventy degrees. To drain the contents of the pelvis into the flanks for the

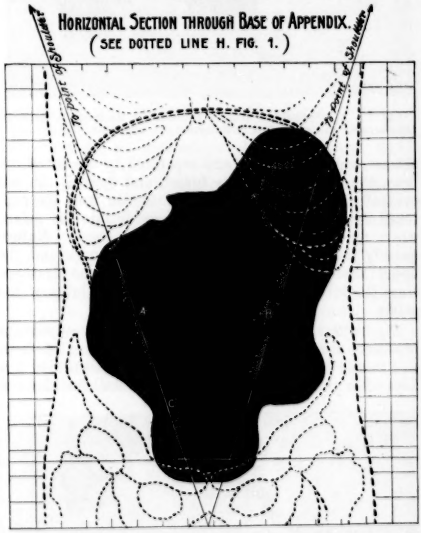


Fig. 6.—Horizontal section through base of appendix (see dotted line H, Fig. 1.): A, right drainage line; B, left drainage line; C, location of appendix.

production of Clark's postural drainage, the patient's feet would have to be raised very high.

In Figure 6 we see that by turning the patient in a lateral position, almost all the cavities may be drained. For instance, in the case of appendicitis, the entire peritoneal cavity may be drained perfectly by placing one drain in the pelvis and the other in the flank, and having them passed out through ordinary incision for appendicitis the patient is turned on the right side. This is the position which I use in most cases of drainage for appendicitis. If the infection is confined to any one of the cavities, the drainage would then be placed and the position utilized to suit the case in hand—for instance, if one flank alone is involved, the drainage should be placed at the most dependent part of the cavity that is to be drained. In addition to the experimental work done

by many experimenters and investigators and brought out especially by Clark and Yates, proving that drainage is immediately walled off, I wish to add the report of four clinical cases.

In Figure 7 is illustrated a case of appendicitis with diffused peritonitis in which the drain worked successfully locally and was as usual walled off by the intestines, but owing to gravity, some of the infective material flowed into the space between the kidney and the liver and an abscess was formed outside of the wall, entirely distinct. This condition was found postmortem.

In Figure 8 is seen an appendiceal abscess, filling the entire right flank and side of the abdomen, which was opened and successfully drained; the wall was already intact and was not disturbed. Five days later another

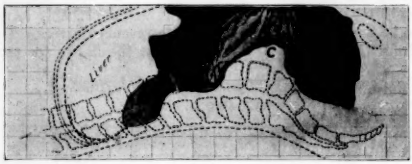


Fig. 7.—A, appendiceal abscess successfully drained: B, separate reno-hepatic abscess found postmortem; C, appendix.

abscess, entirely distinct and separated by the intestines from the original one, was found, and opened. It was evident that part of the original infection from the ruptured appendix dropped over the divide into the pelvis, while most of it went into the right flank. Nature quickly threw up a wall around the appendix and the upper abscess and thus kept away from the drainage tract the infection that had fallen over the brim of the pelvis.

Figure 9 shows drainage of an acute ruptured appendiceal abscess in which the patient had rolled from side to side prior to the operation. The patient died five days after the operation and a perfect wall had formed

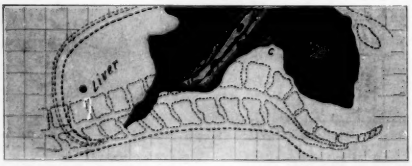


Fig. 8.—A, appendiceal abscess successfully drained; B, separate abscess discovered six days later; C, appendix.

around the drain, the intestines had closed in, solidly, and seemed to be in a healthy condition, but an extensive accumulation had taken place in the left flank. Part of the infective material, after the rupture, had, by the movements of the patient, been gravitated into the left flank; the intestines filled in around the drains, thus shutting off and segregating the second focus of infection.

Figure 10 represents an acute pyosalpinx, with large abscess, tubes removed and cul-de-sac drainage applied, which worked beautifully, leaving a healthy tract. Four weeks later it was necessary to open a large abscess which apparently started from the vesico-uterine space. The intestines and omentum had filled in around the drain, attaching to the surface and fundus of the uterus, and had segregated a portion of the infection which had fallen over the divide into this space at the time of the operation.

Thus it seems that: *On the insertion of a foreign body into the peritoneal cavity, intestines and omentum attach to it and to each other, forming a complete wall in a few hours. This wall is just as effective in keeping a focus of infection, which has been separated from the drain by gravity, away from the drain, as it is in keeping the field which is being drained from infecting the general peritoneal cavity.*

DEDUCTIONS.

1. Fluids are rapidly absorbed by all parts of the peritoneum: crude or granular matter is absorbed only through the lymph spaces at the diaphragm. (Clark.)

2. A drainage tract always contains microörganisms. (Clark.)

3. Any form of drain is isolated from the free peritoneal cavity in a few hours. (Yates.)

4. A drain causes a flow of serum, by mechanical irritation, which is profuse in proportion to the amount of drainage material in contact with peritoneum. (Yates.)

5. This flow is delivered to the surface only in proportion to the amount of drainage passing out through the wound. (Experiment.)

6. Serum and pus accumulate around drainage only

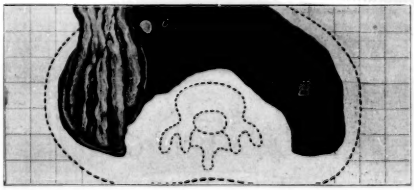


Fig. 9.—A, successful drainage of right flank; B, post-operative abscess in left flank; C, tip of gall bladder.

when the drainage at the outlet is less in amount than that contained inside or when drainage is too small. (Experiment and clinical observation.)

7. Blood and pus in quantity are never found in the neighborhood of a properly applied drain after forty-eight hours. (Clinical observation.)

8. The flow of serum resulting from the irritation of a drain in the free peritoneal cavity dissolves blood clots and thick pus, leaving gauze drainage clean and white by the time the flow ceases. (Experiment and clinical observation.)

9. Drainage placed within a walled abscess cavity does not excite a flow of serum, therefore blood and pus are not drained from formed abscess cavities by capillary action. (Experiment and clinical observation.)

10. Small gauze drains are likely to be choked at the exit unless covered by a tube or protective. (Clinical observation.)

11. Extensive gauze drains are not thus affected and act in proportion to the amount coming through the opening, but will only drain when it is in contact with dressing or clothing, or when its outside end is at a lower level than the depth of the cavity to be drained. (Experiment and clinical observation.)

12. A tubular drain drains perfectly a walled cavity or will drain the peritoneal cavity under the influence of

gravity if it does not become choked, but will not drain up hill, except when the fluid is confined. (Experiment and clinical observation.)

13. A single tube is much more likely to be choked by intestines and omentum than two or more parallel tubes. (Clinical observation.)

14. There are three cavities or basins of the peritoneum to be drained; the right and left flanks, separated from each other by the spinal column, and the pelvis, separated from the flanks by the psoas muscles. Either flank holds more fluid and is an inch deeper than the pelvis and its bottom is more than four inches below the top of the divide made by the psoas muscle on which the appendix rests. The body must be elevated to an angle of fifty-one degrees to bring the bottom of the flank on a level with the divide, and to an angle of sixty or seventy degrees to properly drain by the Fowler position. The entire abdominal cavity can be drained by a lateral position.

A line drawn from the center of the surface of the perineum to the tip of the shoulder will pass through the deepest part of the pelvis and flank. I have called these lines the right and left drainage lines (Fig. 6).

There are no independent cavities or basins between these lines. As it is a well-known clinical fact that drainage should always be in contact with the parietal peritoneum on at least one side, I make it a general rule that drainage should never be placed between these drainage lines except just above the pubic bones. The deepest points of the flanks are best drained external to these lines (cadaver and plaster cast).

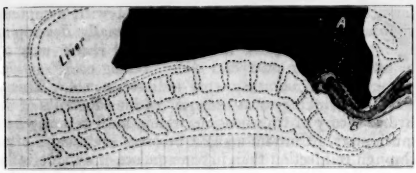


Fig. 10.—A, abscess developing in vesico-uteral space; after successful cul-de-sac drainage (B).

CONCLUSIONS.

1. Gravity is the most important principle in peritoneal drainage, therefore drainage must reach the most dependent point of the cavity to be drained. The patient must be placed in the position that would naturally cause the fluids in the peritoneal cavity to gravitate to the drain, always bearing in mind the anatomy of the three anatomical cavities or basins.

2. Gauze or capillary drainage is the most widely applicable and useful of all drains if used in sufficient quantity to preclude its being choked by débris and provided the drain is as large in circumference at its exit as it is at any point within the cavity, and provided it is in contact with abundance of dressings on the outside.

3. Gauze drainage is a very dangerous agent if all the foregoing principles are not kept in mind in its application.

4. If a surgeon remembers that his drain ceases to be effective in a few hours, he places it with the idea of removing septic fluid in the shortest time possible according to the principles of drainage, and usually gets results.

5. If he is deluded by the belief that his drainage will continue to work for days and that fluid will run up hill to get to the drain, he will usually place his drain accordingly, and is consequently disappointed in drainage.

6. If a surgeon habitually removes gauze drainage before it is loosened by the natural process, a large per cent. of his cases will have secondary sepsis, post operative obstruction, or post operative hernia.

7. Drainage (except a small precautionary cigarette or tubular drain) can rarely be safely removed until the fifth or sixth day—many times are best left till the end of 2 or 3 weeks.

8. Capillary drainage is inefficient for draining defined abscess cavities.

9. Tubular drainage is appropriate for defined abscess cavities, but is an uncertain drain in the free peritoneal cavity except when aided by gravity.

PROBLEMS AND DUTIES IN RELATION TO MALARIA.

WILLIAM KRAUSS, M.D.
MEMPHIS, TENN.

While doing such missionary work as I have been able on the subject of fevers, I have frequently heard the argument that with the eradication of malaria the medical profession in the country districts would be, like Othello, without an occupation. I do not charge any member of the profession with such narrowness and fallacious logic; I think rather, that we have been slow in taking hold of the prophylaxis of malaria chiefly because it involved unsolved problems and not because we thought it would injure our business.

The business of practicing medicine depends for its success on the prosperity of the community and no sickly community can be expected to prosper. Medical orators are wont to tell us that we belong to the only profession whose disciples labor to their own undoing in promoting public health work, but here are the facts: Some of the patients who come to our hospitals tell us the country doctors treat all diseases with huge doses of calomel and quinin and that they, the patients, do not intend to remain in such a country any longer if they have to be in a state of chronic salivation to exist. Planters and plantation managers say they expect to remain only until they have made a "stake" and will then leave for a large city.

The fact is that to-day no region should be uninhabitable on account of malaria and, indeed, much of the so-called malaria is something else. The report of the United States Census for 1900 shows in the "South Mississippi belt" a death rate per 1,000 deaths from all causes, of 88.8 from malaria, and an actual increase of ratio since 1890. In Memphis the death rate per 1,000 deaths for 1905 was 92.1, while in one hospital the rate was 107 per 1,000. There were 2,487 total admissions, of which 414 were for malaria, with 16 deaths, giving a malaria mortality of 3.8 per cent. or 10.7 per cent. of all deaths in the hospital.

As a matter of fact this great malaria mortality is largely a matter of erroneous diagnosis. It shows that parallel with this problem of malaria prophylaxis from an economic viewpoint is the question of diagnosis of obscure disorders, because it is inferred that the state of nosologic knowledge of the intelligent patient reflects that of his physician. Being "full of malaria" is still believed by some to be the chief reason

of ill health. Patients come to me from the lowlands and the country surrounding Memphis and say that they have been out of sorts all the year and that they have been exposed to miasmatic influences so long that they know they are "just full of malaria." In most instances this is not the case. I have seen tuberculosis, sepsis, gall bladder disease, liver abscess, dysentery, uncinariasis, chronic nephritis and visceral malignant disease, in persons who come telling me the same tale of "malaria in the system." They may have taken calomel, or quinin, or some quack chill tonic, or, perhaps they have not taken anything in a long time and for this reason know they need something "to get the malaria out of the system."

Now, nothing is more amenable to proper treatment than malarial fever, and a recent infection is almost never anything but a fever. The sequelæ, the malaise, the cachexia, "biliousness," indisposition, etc., are never the result of an attack of malarial fever *per se*. All practitioners know that in the spring malarias are paroxysmal and, as the season advances, the recovery from an attack becomes less and less complete. We know that, as a rule, the physician does not get many cases of paludism to treat until mid-summer and that the condition becomes worse and the anemia more pronounced as the season advances. In the spring a patient can take his quinin "straight" and fare well, but toward the end of the season an ill-timed dose of quinin may produce grave consequences.

WHAT IS MALARIA?

Thayer, in the most magnificent work on malaria ever presented to the American physician, tells us that malaria is only fever, more or less paroxysmal, divisible into three main varieties, each caused by a blood parasite. He tells us to let our patients sit in the sun and the chapter on treatment goes into great detail of the relative merits of the different cinchona alkaloids and their salts. Who would advise a "swamper" to sit in the sun or to take quinin without preliminary treatment? Is it then that we have a different brand of malaria in Memphis from that in the hospitals in Baltimore?

I have devoted 15 years to the study of this alleged difference and to the question: What is malaria? I answer that in the beginning it is an infection of the blood by one or more groups of one or more varieties of blood parasites whose life function in the body is the destruction of hemoglobin. The sporulation, more correctly, segmentation, of these parasites initiates the train of symptoms, viz., chill, fever and sweat, with the well-known clinical modifications. Logically, each particular segmentation would be expected to cause the multiplication of this infection from 8 to 20 fold or more. We know that this does not happen and that frequently, after a few paroxysms, the chills, and later, the fever, disappear without specific treatment. We also know that each subsequent paroxysm results in a smaller and smaller reduction in the number of erythrocytes and amount of hemoglobin. Two things evidently happen: 1. A resistance to the infection is developed. 2. The blood-making function is stimulated to a point at which it more than keeps pace with the blood destruction. Hyperplasia takes place in the spleen, liver and kidneys, and gradually the way is paved for the condition which is called probably erroneously, chronic malaria. But we have no trustworthy evidence that any particular group of parasites from a single infection can undergo many short cycles, i. e., to segmentation, except the quartan, which is relatively rare. After a number of segmentations, conjugation is supposed to occur and the parasite goes into the long cycle, i. e., forms so-called resting bodies or gametes and gametocytes, which is the stage necessary for the beginning of the mosquito cycle or development into sporozoites. This so-called resting stage is the end-stage, so far as this particular infection of the patient is concerned; others of the same brood may persist in the active form but the associated symptoms call for treatment which eradicates them.

In the estivoautumnal fevers this long cycle may begin a few days after the first paroxysm, though usually, somewhat later. We know little about the life history of the malaria parasite in the spleen and bone marrow; possibly conditions there favor many repetitions of the short cycle, but it is significant that if such patients as are said to have chronic malaria are removed from further infections they soon recover, showing, as a rule, a developed property of self-immunization, rather than a chronic infection. Occasionally, it is true, we observe patients with recidiva long after such removal. It is also a common observation that the "cure" is ushered in by a critical paroxysm, due to disturbed symbiosis.

WHAT IS CHRONIC MALARIA?

For these reasons I believe that chronic malaria is a state of relative immunity during which repeated infections produce relatively insignificant reactions. We have a state of symbiosis in which the immunizing contest between the parasite and the blood cells and blood-making organs is in a state of equilibrium. This is the larvate malaria occasionally associated with symptoms simulating other diseases but more usually developing into paroxysms under the influence of shock, surgical or otherwise, the puerperal state, "taking cold," sudden change of environment, acute indigestion, etc. This is the "bad-drinking-water malaria" of the adherents of the hydric theory of transmission, which, until recently held much sway. Chronic malaria becomes acute more often through reinfection than in consequence of outside influences, though these may shorten the period of incubation. Under this hypothesis the merozoites resulting from segmentation do not invade new cells but hibernate somewhere in the interior and become active when reinforced by a new infection or die when the patient moves to a non-malarial climate, but they do not, *per se*, produce any paroxysms. Under frequent reinfections the patient becomes "bilious" to a marked degree; he fears to take quinin because he fears hematuria; he takes calomel, chill tonic, liver pills, anything except quinin.*

As to the hemoglobinuria, Osler's "Practice," latest edition, says: "There is no question as to the malarial nature of this disease, but whether there is a special malarial parasite is not yet settled."

Quoting Thayer, he says: "There is little evidence to show that the malarial hemoglobinuria of the southern states is due to quinin."

In direct contradiction to this statement, I make the following assertion: In such cases (of chronic malaria without paroxysms or marked cachexia), quinin without a preliminary purge or a saline to restore the tonicity of the blood, produces symptoms of intoxication and sometimes hemoglobinuria; not necessarily quinin, but any factor disturbing symbiosis, as "taking cold;" the majority, however, give a quinin history, the prolonged malarial infection being a necessary antecedent.

* Schaudinn announces that he has observed a parthenogenesis of female gametes, e. g., a reversion and segmentation of these "resting" bodies. This revives a belief long since abandoned; at any rate, this is relapsing, not "chronic" malaria.

TREATMENT.

What, then, are we to do in such cases? We are only considering therapy in so far as it has a bearing on the eradication of the endemic. If such a patient is put to bed and placed under the best hygienic conditions, given eliminatives, followed by arsenic, and the malarial leucocyte variation disappears, he may be considered as cured. If hemamebæ appear in the peripheral circulation during this time, tentative doses of quinin may be given to try the hemolytic reaction and then larger doses until a cure is effected. The time to give quinin, and the only time, is when developing parasites are found in the peripheral blood, provided, further, that the infection is fresh, as evidenced by a characteristic fever curve, otherwise a preliminary purge is absolutely demanded. It is not necessary to salivate your patients or to give calomel to all of them. In the autumn it is my routine practice, so far as I employ routine, to give two or three 10 or 15-gram doses of sodium thiosulphate at desirable intervals until the bowels are freely emptied. Pernicious cases must, of course, be treated more expeditiously and if acute perniciousness supervenes on chronicity, it is better to take chances with intravenous medication; there is slight probability of the patient recovering in any event.

If acute paroxysmal malarias are properly handled with a persistent follow-up treatment, such a condition can not develop, and the most prolific source of the season's infection is definitely eradicated. The prophylaxis of malaria and its definite local eradication depends alone on the complete cure of our malarial fevers. The small percentage of natives who do not have paroxysms or distinct evidences of the infection should have their blood examined occasionally. Two objections are urged against this plan: 1. The patient will object on the ground of expense and impracticability. 2. There are few skilled microscopists in the country.

As an economical proposition, bearing in mind that each malarial paroxysm adds to the sum of pathologic changes, more or less permanent, and that many disorders, progressively fatal, are mistaken in the beginning as "just a touch of malaria," is it cheaper to spend weeks and months vainly trying to regain health, or to have oneself looked over from time to time?

As to the second objection, 30 years ago it would have been regarded as the height of extravagance for a business house to employ a stenographer; to-day, it is a small concern that does not require a number of them; to-day there are laparotomists in the country, telephones, electric light, waterworks and trolley cars, and as soon as practitioners learn to appreciate the necessity for skilled microscopists they will have them also. Almost every patient with malaria in my charity service during the last quarter (July to October, 1906) had his blood examined before the treatment was begun; the temporary illness of an assistant is the only excuse for the "almost." We had one death in this service, a man brought in comatose, who died within two hours. In looking over the annual reports of a local hospital I find the following classification:

Various forms of malaria, 857 cases, 15 deaths.

The following is but little better:

	Cases.		Cases.
Estivoautumnal	95	Pernicious	6
Intermittent	24	Toxemia	4
Remittent	21	Tertian	264

In this list some visiting physicians made an attempt to classify their fevers properly, and the others did haphazard guesswork. Among these I found, at random, two cases of the quartan type, one being associated with the estivoautumnal type. Here there were 16 deaths.

If it is borne in mind that of all fevers, malarial is the most tractable, what excuse have we to offer for a hospital death rate of from 2 to 6 per cent.? And if we bear in mind that the disease is absolutely preventable, how can we complacently look on a ratio of 11 per cent. to the total number of deaths?

I hold that such a state of affairs is absolutely unjustifiable, but the worst is yet to come. It is safe to assert that not one of these patients has been instructed in the matter of his responsibility to his fellow man in respect to harboring malarial organisms.

CONCLUSION.

1. There is not the shadow of an excuse for failure to make an exact diagnosis in all fever cases.

2. The blood of residents of malarious localities should be examined at frequent intervals. This does not constitute an encroachment on personal liberty that can weigh a feather's weight as compared with vaccination.

3. Fever cases should be treated in accordance with the findings of a thorough blood examination, with especial reference to time of dosage and to the complete immunization of the individual for the sake of his neighbors.

4. Quinin judiciously used in accordance with findings of a blood examination very rarely does harm; its prohibition on the ground of possibly precipitating a hemoglobinuria is unpardonable; its administration during hemoglobinuria is very dangerous and usually unnecessary; a blood examination will save such patients from almost certain death.

5. The screening of houses and the destruction of breeding places of anopheles should be encouraged so far as possible, but the prophylaxis of malaria and its definite local eradication depends on the destruction of the parasite within its alternative host, man.

Clinical Notes

THE PRETUBERCULAR STAGE OF PULMONARY TUBERCULOSIS.

CHARLES FRANCIS BEESON, M.D.
ROSWELL, N. M.

Though the symptoms in the pretubercular stage of pulmonary tuberculosis are extremely uncertain, there are many cases in which, if properly conducted, the patients may recover with scarcely the knowledge that they were affected with the dread disease.

Pulmonary tuberculosis is a disease, the incipiency of which is of necessity slow, but which, after a time, may either become rapid, or continue in a chronic progressive course covering a considerable period of time. The majority of primary infections gain entry through the respiratory tract; and study of the physiology of respiration and of the histology of the lung will convince one of the difficulties which beset the entrance and lodgment of the bacillus and should demonstrate to the most skeptical that in all probaility one germ only, or at most a single isolated colony primarily reaches the termini of the ciliated tubes, the entrance to the unprotected walls of the alveoli.

It requires from three to six weeks for the first tubercle to form; this tubercle must break down and infiltrate its

microscopic neighborhood, which in turn must pass through the same cycle of development, finally reaching by extension a state of magnitude sufficient to alter the local structures and systemic functions. Knowing this, we can appreciate the words of Professor Cornet, of Berlin, when he says that the very earliest period at which physical signs become known to us is from six months to one and a half years after the implantation of the germ.

I desire to call attention to an early if not a primary period in the development of this disease—one of latency which merges insensibly from a state of health into one of recognized disease.

The phthisical habit is to be recognized in a person who is tall, delicately built, with oval face, clear skin, blue eyes, long eye lashes, drooping shoulders, winged scapulæ, sunken chest, prominent clavicles and with ribs markedly slanting from behind forward, thin hands with in-curved nails. An almost opposite condition, viz.: the dark-skinned, raw-boned, thick-lipped type, has been associated with this disease. In all probability this is the result of a disproportioned make-up of the vital organs and a disturbance of that equilibrium which should exist between them, perhaps an arrested development in some of them. Sooner or later such an individual may fall a victim to this disease.

In such a person the chest measurements will be found to be less than 35 inches. By dividing the number of pounds weight by the number of feet in height we will have in the result the so-called corpulence, and if the result falls below 21 it is very inauspicious. Often there is an undersized heart, with a relatively lessened arterial blood pressure. The skin of the body may be marble white in contrast with the color of the hands and face, and often a brown pigmentation, the so-called liver spots, may be seen.

A close observer may note that the eyes are too bright and that perhaps one pupil is larger than its fellow at times, due to irritation of the ciliary nerve through the cervical sympathetic from slight changes in one apex. The lips may show a bluish tinge from deficient oxygenation or the margin of the gums show an unusual redness; one cheek will often show a transient blush. The hair becomes brittle and the mustache droopy. Appetite is variable and uncertain; a vague nausea at the sight of food being often present, and at meals the patient pushes aside the meat, nibbles at it or avoids it altogether. Decided variations in appearance may be noticeable from day to day, more especially with the changes in the weather; the weight may fluctuate, or there may be a gradual loss thereof, the flesh becoming flabby.

The patient fatigues easily, becomes tired and languid as evening approaches, and breath seems shorter than formerly; he can not do the work that he formerly could. The temperature will be found to be subnormal in the morning, with or without an afternoon rise, the thermometer registering slowly, often requiring from five to ten minutes to reach a half degree. Pains in the chest are not to be ignored. They may radiate to the shoulder and arm of affected side; the angle of the scapula is a favorite site. The patient clears his throat frequently, the voice is weak and often husky, and a single expiratory cough seems to relieve a vague irritation somewhere, though a careful examination of the lungs may reveal no abnormal sounds. A weakened respiratory murmur in one or both lungs would be suggestive and on full inspiration a rumbling noise is often heard at the end of the act as if the lung had been lying dormant and were just opening up. A single cough often follows this inspiration if deep.

Careful inspection may reveal deficient expansion at one apex or the other, or the Litten shadow may not fall as it should. Owing to the loss of the normal elasticity of the lung tissue from a slight condensation of the parenchyma at a certain point, the latter part of the expiratory effort becomes audible, producing a prolonged expiration nearly always at or near an apex. The same changes would produce an impaired resonance at this point. The percussing finger may produce a localized muscular spasm, the so-called myoidema. By placing the ear close to the open mouth of the patient, a fine crepitus is sometimes heard during expiration, the laryngeal crepitus, sounding not unlike the scratching of a fine pen on paper.

Sooner or later a slight hemorrhage or a protracted "cold" will startle the patient, and from this event the beginning of pulmonary tuberculosis is usually dated by the layman, and only too often by the physicians of the present day. In reality this only means that either a congested tubercular area has leaked or that a tubercular focus has caseated and scattered, throwing toxins and bacilli into the surrounding tissues. From the effects of this caseated material on the lung tissue there will soon be positive signs of an active inflammation extending much more widely, however, than the actual focus of the disease.

In direct ratio to the virulence of the poison and the vulnerability of the tissues will be the ultimate course of the case, whether it be phthisis florida or the chronic ulcerative form.

TREATMENT OF INGROWING TOENAIL.

GERALD B. WEBB, M.D.
COLORADO SPRINGS, COLO.

Some years ago I published[1] a method of treating ingrowing toenail by the use of silver wire. Latterly I have made a few changes in the technic which simplify the method for those who found difficulty in the mechanical adjustment of the wire. Instead of the annealed silver wire of pin size, I now take surgeon's silver suture wire, No. 26 (occasionally larger or smaller, depending on the case), and twist it, as shown in Figure 1, to get the effect of a piece of string. This can now be easily manipulated to fit the toe without the need of pliers or artery forceps.

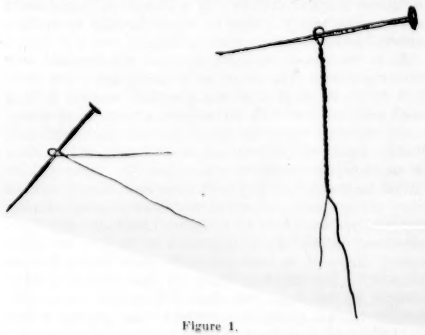


Figure 1.

1. Medical News, Dec. 5, 1899.

Having molded it to fit accurately under the nail and around the edges, as in Figure 3, a piece of adhesive plaster is laid on the toe (Fig. 2), the wire reapplied and kept in position by straps of adhesive plaster run around, as in Figure 4.

The principle consists of two factors: 1, mechanical, the replacing of the nail, often jagged, by a non-irritating, smooth substance; 2, chemical, the formation of the albuminate of silver by the contact of pus with the silver, thereby causing destruction of pus organisms.

Figure 2.

Figure 3.

Figure 4.

I usually advise patients to wear a boot which does not crowd the toes, and sometimes advise the application of a wedge of absorbent cotton between the big toe and the second toe. Patients can daily readjust the silver wire appliance themselves, and are instructed to wear it for ten days until the nail has had time to grow out. They are then advised as to the necessity, in future, of cutting the nail square across instead of rounding off too much of the sides.

SUCCESSFUL RESECTION OF TWELVE FEET AND TWO INCHES OF THE ILIUM

IN CASE OF CRIMINAL ABORTION.*

AXEL WERELIUS, M.D.
CHICAGO.

In a careful search of the records of cases of bowel resection I find no successful resection of a greater length than in the following case:

Patient.—A young woman, aged 20, seen May 20, 1906, in consultation with Dr. M. Meinhardt.

History.—About six hours previously the patient had undergone an illegal operation, performed somewhere on the north side of the city. On awakening from the anesthetic she was informed that she would have to undergo another operation. She was then taken to the home of her affianced on the south side and Dr. Meinhardt called. He states that he found a large mass of intestines protruding from the vulva.

Examination.—I found the patient in bed but, except for some pain in the lower abdomen and some nausea, she complained very little. She was in the dorsal position, with the knees flexed. Pulse 90, temperature 99 F., and respiration 20. The expression was somewhat anxious and there was some restlessness. Heart and lungs were negative. The lower abdominal zone was slightly tender and the corresponding parts of the recti were rigid. An enormous length of the bowel, minus its mesentery, was seen escaping from the vulva.

Operation.—After a rapid examination the patient was immediately sent to St. Bernard's Hospital and prepared for operation. The following were present at the operation: Drs. J. P. Webster, Belson, Meinhardt and Quile. An incision about three inches in length was made through the right rectus. On opening the peritoneal cavity it was found to be partly filled with blood. A large amount of the mesentery minus its bowel presented in the field. The disattached bowel was felt to escape through a rent in the left broad ligament into the uterus. The hemorrhage present seemed to come mainly from the injured broad ligament and not, as one would suspect, from the mesentery, as this was torn closely from the intestine and included the serosa. On account of some oozing from the border of the mesentery and to prevent future adhesions it was decided first to run a suture along its edge. This took considerable time. Then the gangrenous bowel, twelve feet and two inches (365 cm.), was resected and withdrawn through the vagina. An end-to-end anastomosis was made with a Murphy button. The uterus was next inspected and found to contain seven punctures. The one extending through the left broad ligament was somewhat enlarged and the interior of the uterus inspected. The fetal head and part of the placenta had been left. These were removed and the uterus curetted through the enlarged opening. The uterine punctures were then sutured and after the peritoneal toilet and the establishment of drainage the abdomen was closed in layers.

Postoperative History.—The patient was transferred to a private room in fair condition. Pulse was 150, but of good volume, temperature 97.4 F., respiration 30. A saline transfusion was given under the breasts. After awakening from the anesthetic she was put in Fowler's position. Strychnin, 1/30 gr. hypodermically, was given every three hours, and coffee and normal salt solution by the rectum every four hours.

During the night the patient rested fairly well, complaining but little of pain or nausea. The following morning at 9 her pulse was 120, respiration 26 and temperature 99.8 F. Nausea increased and emesis was very profuse and of dark brown color and the patient was very restless. Wound was dressed and looked good with a seemingly serous discharge. Abdomen was soft everywhere and no tympanites. In the afternoon the temperature rose to 102 F. At 2 p. m. she was given an enema —1 part magnesium sulphate, 2 parts glycerin, and 3 parts water—with good results. During the night she was restless and had four bowel movements. On the morning of the second day her pulse was 120, temperature 100.8 F., and respiration 20. Nausea and vomiting had practically ceased by the afternoon, and during the night she was given her first nutrient enema. She rested well, sleeping at intervals. By the morning of the third day her pulse was 104, temperature 100 F. and respiration 18. Wound began a profuse discharge of pus containing colon bacilli. This continued until the fourteenth day. On the fourth day, in the morning, her pulse was 92, temperature 100 F. and respiration 18. Nausea and vomiting had entirely ceased. In the afternoon she received milk by the mouth. Her condition on the fifth day as regards pulse, temperature and respiration was practically normal, and from that time her recovery was uneventful. The button was passed on the tenth day. During the entire course there was no tympanites. The diet was gradually increased till on the seventeenth day she was put on a regular diet. The patient was out of bed on the nineteenth day, and on June 17, the twenty-seventh day after the operation, she left the hospital. Two weeks afterward she was troubled with a diarrhea, which lasted about two weeks. Later she went into the country, where she improved quickly. On Feb. 5, 1907, eight months after the operation, she has gained 31 pounds, complains of no symptoms of adhesions, or local tenderness.

* Read before the Southwest Branch of Chicago Medical Society, and patient and specimen presented, Feb. 5, 1907.

GONORRHEA IN CHILDHOOD.

J. W. INGRAM, M.D.
MARSHFIELD (COOS BAY), ORE.

CASE 1.—Colored child, aged 7; previous history negative.

History.—The child had been sick for three weeks when I was called. The father stated that the child had been treated for typhoid fever during the entire time, but without any appreciable change for the better. The history was misleading in many respects. The child complained of nausea, slight headache, loss of appetite, abdominal tenderness, pain through

the small of the back, as the father put it, constipation, frequent and painful micturition. The temperature was less than 100 F., pulse was somewhat accelerated. The general appearance was that of one who had suffered long and patiently.

Examination.—I suggested to the mother that a more thorough examination of the child be made, to which she readily consented. In the outward appearance of the vulva there was nothing to attract special attention, except that the tissues were slightly inflamed; on pressure some tenderness was found to exist. On separating the labia a mucopurulent discharge was detected. Here the mother admitted that the child had suffered from leucorrhea for a month or more. With a small eyelet probe I managed to secure a sample of the discharge for examination. A microscopic examination of the discharge (Gram's method) was made and gonococci were found.

Treatment.—I put the child on a milk and other liquid diet, and prescribed a tonic treatment, an alkaline preparation for neutralizing the urine, and absolute rest in bed. Locally I prescribed a wash of permanganate of potash, 1 to 10,000, given by means of a small rubber syringe, three or four times daily; after each washing a small pledget of absorbent cotton, dusted with boracic acid, was placed in the vagina in such a way as to separate the labia. The child made a rapid recovery.

CASE 2.—This case is a little more interesting inasmuch as it occurred in a child of less than 4 years of age.

Patient.—Child, white, aged 3½. Previous history unimportant. This child had been under the care of a physician for over two weeks and had been treated for worms, general debility and cystitis, but without results.

History.—This was similar to that in the former case. I proposed a thorough examination of the child, but the parents objecting, I refused to be further consulted until I was allowed to make such examinations as I saw fit and the parents departed. The following morning I was called to their home to make such examinations as I saw fit.

Examination.—The entire vulva was highly inflamed and tender to pressure; the inner portions of the thighs were likewise red and somewhat tender. On separating the labia a creamy discharge oozed freely from the vagina. A small pledget of cotton was passed into the vagina and withdrawn saturated with the discharge. Microscopic examination (Gram's method) revealed gonococci.

Treatment.—The child was put on a milk diet, plenty of pure, fresh air, tonics, bowels opened freely, and absolute rest required. A neutralizing preparation was given to render the urine bland. Locally I prescribed a wash three or four times daily, of protargol 1 per cent., given by means of a small rubber syringe. After each washing a small pledget of absorbent cotton, dusted with boracic acid, was placed in the vagina in such a way as thoroughly to separate the labia. So far, this child seems to have recovered.

HYSTERIA OR MALINGERING IN A GIRL OF TEN YEARS.

FLAVEL B. TIFFANY, A.M., M.D.
Professor of Ophthalmology, University Medical College.
KANSAS CITY, MO.

In the light of my experience of more than a quarter of a century in the practice of ophthalmology this seems to me a unique case of unusual interest. The question is: Is it likely that this is a case of hysteria in a child of 10 years, with no manifestation or evidence of any immediate approach of the catamenia?

Patient.—Miriam G., aged 10, of light complexion, blue eyes, from Kansas, was brought by her father to consult me Jan. 8, 1907.

History.—The father stated that up to the week previous the child had seemingly good eyes with good vision, but last Friday, January 4, she came from school and said that during the afternoon, while studying, the page suddenly became red. Thereafter she complained of all colors appearing red, with the exception of objects of red color, which looked white. She spoke of the red brick sidewalk looking white, whereas the light gray pavement was red. While in my office the father designated several articles of red color and she would instantly call them white, or he would point to some white object and she would say it was red.

Tests.—I suspected malingering at once and placed the patient twenty feet from a white light and asked her the color of the lamp; she instantly called it red. I then put on a trial frame and inserted a green lens, but she said the light still looked red. I then inserted a red lens; at first she said the light looked white, but finally said, when I put in another lens of the same shade, that one was a light red and one a dark red. I then suggested to her that I should place a lens in the trial frame which would correct the color blindness. With a plano before her eye she would name all colors correctly. I then tested her with the different colored yarns. She at first called all of them red, excepting the red skein, which she called white. I again suggested to her that I could correct the defect by glasses and once more placed the plano glasses before her eyes; then she named, as I pointed to them, the colors correctly. The child had a slight convergent strabismus with hypermetropia, and I suggested to the father that an operation to straighten the eyes would also effect a cure of the color blindness. Whether the fear of an operation influenced the child I do not know, but on January 9, at 5 o'clock, the color blindness, the father said, disappeared as suddenly as it came. This the child also related to me when she called at my office, January 10.

If this phenomenon had occurred in a willful, intractable, disobedient child, one would not have been so baffled for a cause of the malingering, but M. is a modest, obedient, rather retiring little girl of an excellent family.

I prescribed glasses for the existing hypermetropia and allowed the child to go home, advising them, however, to return in six weeks that I might keep the case under surveillance.

805 McGee Street.

THE PASSAGE OF METHYLENE BLUE FROM THE MATERNAL TO THE FETAL CIRCULATION.

S. H. CORRIGAN, M.D.
SIOUX FALLS, S. D.

Failure to find record of any similar observation in the study of placento-maternal circulation would seem sufficient reason for submitting the following:

A woman, three months pregnant, suffering much from a chronic cystitis, was given a capsule of methylene blue compound. As the medicine produced almost complete relief of symptoms, the patient continued taking it up to the time of her delivery, at full term. The average dosage given her was three grains of the methylene blue daily. At delivery the baby, an unusually vigorous child, attracted no special attention, but when the nurse was removing the first diaper she noticed a blue stain on the cotton; each subsequent change of diaper during the first eighty hours after birth gave evidence of methylene blue in the infant's urine, the color gradually disappearing. Nothing else unusual was found in the baby's condition. It was noticed that the liquor amnii showed no unusual color; careful inspection of the sheets and pads used during labor failed to show any trace of color from methylene blue.

From these observations I may perhaps venture to assert:

1. Methylene blue passes from the circulation of the mother to that of the fetus.

2. Either the amount thus passing is an exceedingly small portion of the drug absorbed by the mother or the drug passes from mother to child and *vice versa*.

During six months the mother received into her stomach about nine drams of methylene blue, while an estimate based roughly on the amount of colored urine passed by the infant would place the quantity of the drug in the child's body at time of birth not above one grain.

3. There being no evidence of methylene blue in the liquor amnii, the fetus does not evacuate the bladder, and the liquor amnii accordingly is in no degree composed of fetal urine.

4. The kidneys of the child *in utero* do not secrete urine beyond that found in the bladder at the time of delivery, or, if they do secrete urine beyond this amount, they do not excrete methylene blue, which may be in the fetal circulation.

The first evacuation of the bladder in this case, occurring very shortly after birth, produced the characteristic stain. So it would seem that the kidneys not only secreted urine but also excreted methylene blue, while the child was still *in utero*, but not more than that contained in the bladder at the time of delivery.

APHONIA OF UNKNOWN ORIGIN AND OF SIX MONTHS' DURATION IN A TWO AND ONE-HALF-YEAR-OLD CHILD;

DISCOVERY OF AN OPEN SAFETY PIN IN THE LARYNX.*

JAMES T. CAMPBELL, M.D
Professor of Otology, Rhinology and Laryngology in the Post Graduate Medical School, Chicago.
CHICAGO.

Aphonia is most often due to an inflammation of the larynx when the swollen tissues interfere with free approximation of the vocal cords, to new growths, to a neurosis, or to a paralysis of the recurrent laryngeal nerve. A foreign body in the larynx causing aphonia is rare indeed; yet a complete collection of all the foreign bodies which, at one time or another, have found their way into the larynx would, probably, comprise specimens of every known substance.

ETIOLOGY.

Food products generally gain entrance during mastication while the person is laughing or talking. Metallic substances are occasionally impacted in the larynges of children while they are amusing themselves by putting coins, buttons, toys, etc., in their mouths. In rarer instances, teeth and tooth-plates become loosened during sleep and are drawn into the glottis.

Foreign bodies may also become fixed in the larynx, having previously passed upward through the trachea or esophagus. Edwards[1] relates the curious case of a boy in whom a bronchial gland became detached, passed by an ulcerated opening into one of the bronchi, and was thence expelled up the trachea, and became impacted in the rima glottidis.

Some idea of the frequency with which foreign matters become fixed in the different parts of the air passages may be gathered from a report made by Bourdillat[2] of 166 cases, in which analysis 80 cases were of foreign bodies arrested in the trachea, 35 in the larynx, 26 in the right bronchus and 15 in the left bronchus.

SYMPTOMS.

The symptoms vary according to the size and shape of the foreign body. If fixed in the rima glottidis and large enough to fill the opening, death is almost instantaneous, unless the convulsive respiratory efforts of the patient succeed in dislodging it. On the other hand, small bodies such as fish bones, may remain in the larynx for an indefinite length of time without interrupting respiration and will merely give rise to coughing and a sensation of discomfort. Sharp and angular bodies cause very acute and continuous pain when they become so impacted as to press against the contiguous soft parts. Generally great anxiety and terror on the part of the patient accompany the entrance of any foreign body, however small, into the air passages and in many cases somewhat disguise the real importance of the accident.

DIAGNOSIS.

As a rule, the history of the case is clear and laryngoscopic examination verifies or disproves the statement made by the patient. In children and hysterical women a correct diagnosis can not always be made immediately and at such times a skiagraph should decide the case in question.

There is always great danger while the foreign body remains in the air passages or larynx. It may become dislodged and assuming an altered position close the glottis and suffocate the patient. There is danger also of inflammation and tumefaction of the soft parts of the larynx which may cause more gradually the same result. Even after the foreign body is removed one should give a guarded prognosis as long as there are symptoms of local inflammation.

History.—Ruth J., aged 2, in January, 1906, was given a dose of castor oil by her father, while her mother held her. Violent coughing immediately ensued and persistent aphonia resulted; it was thought by her parents and by the local physicians that during the child's struggles the oil had been inspired into the larynx. They expected that with the advent of warm weather speech would return, but in this they were disappointed, and on Sept. 3, 1906, she was brought to me.

Examination.—On that day I was unable to make a laryngoscopic examination, but on the day following, at the Post-Graduate Hospital, she was anesthetized and with the laryngeal mirror I saw a metallic body lying on the upper surface of the right vocal cord.

Removal and Recovery.—With the Schroetter tube forceps I grasped this body and withdrew an open safety-pin, which was 23 mm. in length and 15 mm. in extreme breadth. The pin point and the looped hinge were held fast in the respective ventricles of the larynx. The child was cared for at the hospital for thirty-six hours and was then allowed to go home, speaking as plainly as before the castor-oil episode. The mother had no knowledge of a safety-pin being about her own or the baby girl's clothing, but probably it was crowded into the child's mouth during her struggles to escape the castor oil, and then drawn into the larynx during a forcible inspiration.

34 Washington Street.

---

* Read before the Chicago Laryngological and Otological Society, Dec. 11, 1906.

1. Med. and Chir. Transactions, xxxvi.
2. McKenzie: Diseases of the Pharynx, Larynx and Trachea

The Blood During Pregnancy After Splenectomy.—Cova reports in *Ginecologia*, iii, 716, 1906, the findings in regard to the blood in a woman who became pregnant about a year after removal of the spleen on account of malarial enlargement. She was in good health thereafter. The number of red corpuscles and the number of whites were approximately normal throughout the pregnancy, as also the percentage of hemoglobin, but the proportion between the white leucocytes differed somewhat from normal. Polynuclear forms were abnormally abundant, while lymphocytes were scanty. Eosinophile leucocytes also abounded and increased in numbers during the confinement, while the red corpuscles showed somewhat reduced resisting powers.

New and Non-Official Remedies

THE FOLLOWING ARTICLES HAVE BEEN TENTATIVELY ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR INCLUSION IN THE PROPOSED ANNUAL, "NEW AND NON-OFFICIAL REMEDIES.", THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT, BUT TO SOME EXTENT ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE FINAL ACCEPTANCE AND PUBLICATION IN BOOK FORM.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

(A list of all accepted articles is published on one of the advertising pages of The Journal in the first issue of each month.)

(Continued from page 877.)

BROMO-MANGAN.

LIQUOR FERRO-MANGANI BROMOPEPTONATI "DIETERICH."

Bromo-mangan is Ferro-mangan Dieterich with the addition of 3 per cent. of bromopeptone. Bromopeptone contains 11 per cent. of bromine.

The process of preparation is the same as that given under Ferro-mangan "Dieterich" with the addition of a solution of bromopeptone.

Bromo-mangan is a clear dark brown liquid of agreeable odor and taste.

Method of Valuation: After determination of the percentage of iron and manganese, a test method should be employed as described by Dr. Karl Dieterich in Helfenberg Annals, 1901, pages 162-165, to ascertain the percentage of halogens in bromopeptone: About 0.5 bromopeptone to be thoroughly mixed with a few grammes of a mixture of 1 part potassium nitrate and 2 parts sodium carbonate, either in a porcelain or platinum crucible. The mixture is then covered with a light layer of sodium carbonate, covered and carefully heated until reaction sets in. When finished a little potassium nitrate is added to obtain a smooth flux, then the molten mass is exposed to glowheat for about 15 minutes. After cooling the mass is dissolved in hot water, rinsed into a beaker, filtered, if necessary, acidulated with diluted acetic acid and bromate present reduced with sulphurous acid. The excess of acid is driven off by heat, the liquid strongly acidulated with nitric acid, again heated, until the gas formation ceases, then precipitated while hot with silver nitrate. The silver bromide is collected on a weighed filter, washed with very dilute ammonia water, as the preparation contains hydrochloric acid, dried and weighed.

Actions and Uses.—Bromo-mangan is a reconstructive tonic, blood making adjuvant and a sedative.

It is claimed to be useful wherever anemia is associated with nerve impairment, as in epilepsy, neurasthenia, hysteria, etc.

Manufactured by Chemische Fabrik Helfenberg A. G., near Dresden, Germany (Reinschild Chemical Co., New York. U. S. trademark No. 44,333.

EUPYRINE.

VANILLIN-ETHYLCARBONATE-PARA-PHENETIDIN.

Eupyrine, $C_6H_4(OC_2H_5)N:[CH.C_6H_2(O.CO.OC_2H_5)(OCH_3)]\ 1:4 = C_{19}H_{23}O_5N$ is a compound of para-phenetidin with vanillin ethyl-carbonate.

It is prepared by the action of vanillin ethyl-carbonate, $C_6H_3(COH)(O.CH_3)(O.CO.OC_2H_5)\ 1:3:4$, on an equivalent amount of para-phenetidin, $C_6H_4(O.C_2H_5)(NH_2)\ 1:4$. Chemically it differs from acetphenetidin (phenacetin) in that the vanillin ethyl-carbonate group has replaced the acetyl group of acetphenetidin.

It occurs in light yellow, needle-shaped crystals, melting at 87° to 88° C. (188.6° to 190.4° F.); tasteless, with faint odor of vanillin. It is insoluble in cold water, sparingly soluble in warm water and in cold alcohol, readily soluble in warm alcohol and in ether or chloroform.

Concentrated sulphuric acid is colored by eupyrine greenish yellow in the cold and dark brown on heating to the boiling point. Heated on platinum foil it burns without residue. Acids and alkalies decompose it.

Actions and Uses.—The toxic action of phenetidin is said to be counteracted in eupyrine by the vanillin. Doses twenty times as great as those used for man show no production of an amount of methemoglobin recognizable by the spectroscope. It is claimed to be a stimulant antipyretic.

Eupyrine is claimed to be useful as an antipyretic, especially for patients with a weak stomach or otherwise sensitive, on account of its freedom from side effects.

Dosage.—For adults, 1,5 Gm. (23 grains) once or twice daily. It can be given by itself as a powder.

Manufactured by Vereinigte Chininfabriken, Zimmer & Co., Frankfort a. M., Germany. (C. Bischoff & Co., New York.) U. S. patent No. 658,446, U. S. trademark No. 39,577.

FERRO-MANGAN DIETERICH.

LIQUOR FERRO-MANGANI PEPTONATI "DIETERICH."

Ferro-mangan is a solution of a compound of peptone with iron and manganese, containing 0.6 per cent. of iron, 0.1 per cent. of manganese and 1.5 per cent. of peptone.

It is prepared by covering 40.0 Gm. of Iron and manganese peptonate "Dieterich" with distilled water for one hour, then heating to boiling with 550.0 Cc. of distilled water and allowing to cool. An aromatic mixture is added consisting of 100.0 Cc. cognac, 75.0 Cc. alcohol, 90 per cent., 0.25 Gm. saccharin, 12.5 Cc. aromatic tinctures, and sufficient distilled water to make 1000.0 Cc.

Ferro-mangan is a clear liquid of a dark brown color and pleasant odor and taste. It is slightly acid in reaction.

The iron is in the organic or non-ionic form (see "Organic iron preparations").

Method of Valuation: The specific gravity at 15° C. (59° F.) should be about 1.056. The percentage of dry residue at 100° C. (212° F.) varies between 13.25 and 16.80. The percentage of residue after ignition varies between 0.99 to 1.05. The percentage of iron and manganese determined by well-known methods varies between 0.58—0.64 per cent. of iron and 0.13—0.19 per cent of manganese.

Actions and Uses.—It is a reconstructive tonic and hematinic.

It is recommended in anemia, chlorosis, convalescence and wherever a general tonic is required.

Dosage.—4 to 16 Cc. (1 to 4 fluidrams), according to age, three times a day.

Manufactured by Chemische Fabrik Helfenberg A. G., near Dresden, Germany (The Reinschild Chemical Co., New York.) Not patented or trademarked.

FORTOIN.

METHYLENE-DICOTOIN.

Fortoin, $CH_2(C_{14}H_{11}O_4)_2 = C_{29}H_{24}O_8$, is a condensation product of cotoin and formaldehyde.

It is prepared by condensation of cotoin and formaldehyde by means of dehydrating agents (hydrogen chloride): $2C_{14}H_{12}O_4+CH_2O=CH_2(C_{14}H_{11}O_4)_2+H_2O$.

Fortoin forms yellow, needle-shaped, tasteless crystals, melting at 211° to 213° C. (411.8° to 415.4°F.). It is insoluble in water, sparingly soluble in alcohol, ether or benzol, but freely soluble in dilute alkalies, acetone or chloroform.

Fortoin dissolves in cold concentrated sulphuric acid with an orange color, and on warming the solution becomes ruby red. Heated on platinum foil it should burn without leaving any residue. On shaking with cold water or alcohol it should not yield any soluble constituents.

Actions and Uses.—Fortoin has an antiputrefactive, bactericidal action. It is said to cause an active, not passive, dilatation of the intestinal vessels by which the nutrition of the epithelium is improved and its regeneration hastened. This action is said to show itself in cases in which tannin produces only apparent success.

Fortoin is recommended as an antidiarrheic in acute and chronic intestinal catarrh and in the obstinate diarrheas due to pellagra and to tuberculosis.

Dosage.—0.25 Gm. (4 grains) three times a day for adults.

Manufactured by Vereinigte Chininfabriken, Zimmer & Co., Frankfort a. M., Germany. (C. Bischoff & Co., New York.) German patent No. 104,362, U. S. trademark No. 39,523.

(To be continued.)

Naming of Carbon Compounds.—The prefix "phen" is commonly used to indicate derivation from or relation to phenol, thus phenol, phendiol, phentriol, phenetrol, etc. It has been proposed to apply the name phen to benzene, C_6H_6, and to indicate all benzene derivatives by this prefix.—*Pharm. Rev.*, September, 1906.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

103 DEARBORN AVENUE . . . . CHICAGO, ILL.

Cable Address . . . "Medic, Chicago"

Subscription price.....Five dollars per annum in advance

[*For other information see second page following reading matter.*]

SATURDAY, MARCH 16, 1907.

THE INFREQUENCY OF TUBERCULOSIS IN LARYNGOLOGISTS AND LUNG SPECIALISTS.

When, some years ago, Flügge and his pupils made the discovery that in coughing, or even in loud talking, patients with pulmonary tuberculosis gave off a fine spray containing tubercle bacilli, it was thought that an important factor in the spread of tuberculosis had been discovered. It was claimed by the discoverers that this form of infection, which they called "droplet" infection, was largely responsible for the transmission of the pulmonary form of the disease, and the idea that personal contact with phthisical patients was comparatively harmless, which had been fostered by the theory of the transmission of the disease by dried sputum, was more or less discredited. While it can not be said that the profession was entirely weaned from the theory of transmission from sputum dust, there is no doubt that the importance of this method of transmission was to some extent minimized, and the new theory to a certain degree adopted in its place. Whether this view is tenable is still more or less of an open question.

Saugman[1] of Copenhagen has for some time been an opponent of droplet infection, and the main fact on which he bases his opposition is that physicians who make a specialty of lung and laryngeal diseases are very rarely attacked by pulmonary tuberculosis. He points out, and with some justice, that no one runs greater risks from droplet infection than a physician engaged in examining the lungs or the larynx. The lung specialist, during the examination of a chest, places himself under conditions favoring droplet infection, for he is constantly urging his patient to cough, in order that doubtful physical signs may be brought out, and must of necessity inspire, perhaps for several hours daily, an atmosphere loaded with minute particles of moisture containing tubercle bacilli. The laryngologist is subjected to even more direct chances of infection, for probably all the members of this branch of the profession have the experience, almost daily, of patients coughing in their faces. That tubercle bacilli are actually transmitted under such circumstances is a proved fact. Moeller claims to have found them on the eye-glasses of an assistant, on the head mirror, on his cheek, and in his own nasal cavities after examining patients with laryngeal tuberculosis.

1. Ztschr. für Tuberculose, January, 1907.

As Saugman points out, notwithstanding these observations the fact remains that of 174 physicians in sanatoria for pulmonary tuberculosis questioned by him only two, or at most three, had become infected with tuberculosis during a period of over three years constant association with tuberculous patients. Of sixty-four laryngologists under similar conditions none had become tuberculous. The main conclusion that Saugman draws from these observations is that in healthy adults the inspiration of droplets containing tubercle bacilli is entirely, or almost entirely, free from risk so far as giving rise to tuberculosis is concerned. That this conclusion is justifiable we are not at all certain. We do not deny the facts or question the figures, but we do feel doubtful that conclusions drawn from these observations are applicable to healthy adults under all conditions. It must be pointed out that Saugman's figures deal with a special class of men, individuals who have a good working knowledge of what tuberculous infection means, and who are by no means anxious to court it. It is fair, we think, to assume that the great majority of these men take special precautions, and, it must be added, they are most of them working in institutions especially constructed to combat tuberculosis. There is little doubt that all of us, particularly the city dwellers, inspire a greater or less number of tubercle bacilli yearly. It would not be correct to argue therefrom that because those of us who are healthy resist infection the inhalation of tubercle bacilli is harmless. Saugman takes too little account of individual resistance in healthy adults and seems to forget that it is generally not the healthy but those who present local or general predisposing factors who contract the disease. For the present, in spite of Saugman's observations, we are justified in assuming that droplet infection probably plays some part in the transmission of tuberculosis.

IMMIGRATION AND INSANITY.

For many years it has been a matter of observation that immigrants furnish an undue proportion of the insane in this country. This was forcibly pointed out during the last century by Dr. Foster Pratt and others. The native Anglo-American stock, when not depleted by emigration and deteriorated by intermarriage, does not seem to be excessively inclined to mental disease. There are sections in this country, especially in certain parts of the middle west and in the south, where foreign immigration has not materially been felt as a factor, and in which insanity is a comparatively rare disease, and while defectives may be found there, the degree and proportion of the particular evil is not specially alarming. In other sections, however, where the foreign element is more in evidence the proportion of insanity is rapidly rising, so that a foreign-born minority of the population furnishes a notable majority of the insane.

The present status of this question forms the subject of a paper read by Dr. Thomas W. Salmon at the recent

State Conference of Charities and Correction at Rochester, N. Y. He discusses a phase of the question which is just now of special interest, namely, the effect of the changed character of the present immigration from that of some years back. Then Irish, Germans and Scandinavians formed the bulk of the new comers and were considered in a general way more desirable additions to the population than the Slavs, Italians, etc., that form the greater portion of the present inflow. Taking the numbers of individuals of the different nationalities certified as insane at the immigration headquarters on Ellis Island and those deported from New York institutions as insane under the emigration laws, he finds a great preponderance of young insane—that is, individuals between the ages of 15 and 30 years—a fact which, as he shows, is of considerable practical importance as indicating a more rapidly increasing burden on the resources of the country. It also indicates, so far as it goes, a special mental instability on the part of these immigrants who, it must be borne in mind, must necessarily include a large number who escape the scrutiny of the inspectors and yet do not break down sufficiently within the two years limit to become public charges and, therefore, deportable. In the table given, Austria-Hungary, Russia and Finland furnish fully 50 per cent. of the total, Ireland and Italy being next. In proportion to the total immigration from special countries, however, the number of those rejected or deported is greater in the Irish and English than in the Slavs and Southern Europeans. The figures are too small to be as conclusive as desirable, though they are significant.

He also gives tables of the proportions of insanity among the different nationalities of foreign born in this country taken from advance sheets of a report of the United States Bureau of the Census, which are very striking. They show that 1 in every 121 of the Irish-born residents of this country is insane, 1 in 185 of the French born, 1 in 195 of the Scandinavians, 1 in 211 of the Germans, and so on in a gradually decreasing ratio till we reach the Italians with a proportion of only 1 in 439. It must be remembered, however, that the Italians and Slavs are comparatively recent comers and much of the insanity among them is yet to develop. This fact affects the figures given in his table comparing the ratio of insanity in the former and the later classes of immigrants, and the statistics are, therefore, not so encouraging as they might appear. "If it is impossible," he says, "to make any reliable comparison between ratios of insanity in the 'old' and the 'new' immigrations, it is not difficult to show that, even with lesser ratios of insanity in the 'new immigration,' the increase in its volume assures us that the influence of immigration on the prevalence of insanity in this state (N. Y.) will be more adverse in the future than it has been in the past unless energetic and successful steps are taken to prevent it."

As regards idiots and mental defectives other than the insane, ruled out by immigration inspectors, the figures are somewhat different and not encouraging. Here the Hebrews and Italians are very largely in the majority, other nationalities being represented by comparatively insignificant figures. This class includes those who would be no less a burden on the community than the insane, comprising as it does a large proportion of individuals with criminal instincts or generally morally defective. Moreover, a very much larger number of such defectives must slip through the inspection than of those whose mental aberration is manifest, and the immigration law is imperfect inasmuch as it does not make their deportation mandatory, except in the case of idiots. The future, therefore, is not promising with the continuation of present conditions. The burdens will increase in all probability until some as yet unforeseen equilibrium is established or immigration ceases. While the immigration inspectors may endeavor to do their full duty—and Dr. Salmon shows that their efficiency has been steadily increasing—it is easy to see that their scrutiny necessarily must be inefficient to keep out the flood of defectives from Europe.

If we could inspect these people in their homes more could be done, but that would be difficult. In fact, we believe it has been tried to some extent and the measures taken by our Government have been resented and embarrassed in some cases by the local authorities abroad. We must remember, also, that a very large part, probably the great majority of the foreign-born insane, become such, not so much from excessive or noticeable original defect as from stress under unaccustomed conditions after arrival in this country; they would probably have escaped insanity under their accustomed conditions at home. This is one of the unavoidable consequences of immigration and can not be completely met by any practicable measures except the exclusion of immigrants entirely. As Dr. Salmon says: "It is the sudden increase of stress on minds but poorly adapted to withstand a very moderate amount of stress which in many instances causes the early development of insanity." We should investigate, he thinks, the most common causes of adversity among newly-landed immigrants and remedy such as are remediable. Among these he mentions the tenement and sweat-shop evils, child labor, the urban concentration of immigrants, the exploitation by their own countrymen, and the common crime of wife desertion. There is work here for all the charity that we can give and it will be for our own profit and safety in the long run if we can give it. The question of the future of this country with the disturbing factors of the excessive influx of alien races is a serious one and sometimes severely tests our optimism. We believe, however, that the ultimate outcome will be good, but the problem nevertheless is one that deserves our careful attention. A composite race has its advantages and it may be that these evils that we see so prominently at present are after all only incidental to the working out of an eminently satisfactory result.

MILITARY EFFICIENCY AND THE MEDICAL SERVICE OF ARMIES.

"Health," said Napoleon, "is indispensable in war and can not be replaced by anything." This axiomatic saying of the greatest soldier of modern times has been proved time and again, in war after war, and campaign after campaign. The entire failure of the Walcheron expedition through the sickness of the command, the terrible losses of the allies in the Crimean war, the disastrous campaign of the French in Madagascar and the heavy losses of the Americans and British from preventable diseases in the Cuban and South African campaigns, all bear witness to the truth of Napoleon's remark. On the other hand, the Germans—who until the Japanese-Russian war have always been considered easily first in the science of preventive medicine—surprised the entire world by the exceedingly low sick rate which their armies maintained in the Franco-Prussian war of 1870-71. Still more recently the astonishing results of the Japanese in their war with Russia have established a new record in preventive medicine and one by which all other nations will be weighed in the wars of the future.

Now, why have Japan and Germany been able to attain results in the prevention of disease in their armies in the field beside which our own high inefficiency rates appear so discreditable? Simply because Japan neglected no measures which were deemed necessary to render her armies efficient, and gave official recognition, both in theory and practice, to the fact that "health is indispensable in war and can not be replaced by anything." Accepting this truth, they prepared for war in time of peace. The first essential in the promotion of efficiency by the prevention of disease was a medical corps adequate in size for war as well as for peace and composed of medical men of the highest class and thoroughly trained not only in the care of the sick but also in the prevention of disease under service conditions. The results thus attained by the Japanese in preventive medicine attracted the attention of the whole world, and we may rest assured that the American people in their next war will be satisfied with nothing less than the Japanese standard.

The keynote of Japanese success was preparedness—are we prepared? Congress has just adjourned, having again failed to pass the bill the title of which is "to increase the efficiency of the medical department," but whose main object is to increase the efficiency of the Army by making adequate provision for the care of the sick and the prevention of disease. In the light of what has so often been stated in these columns of the total inadequacy of the medical department of the Army even in time of peace, a complete breakdown in time of war is inevitable, and the failure of this bill can be considered nothing less than a national calamity and one which, when the time comes, will be felt in many homes throughout the country. When war comes again, as it will, and the cry goes up throughout the country of unnecessary suffering, sickness and death among the soldiers who have responded to their country's call, and who deserve nothing less than the best attention that care and foresight on the part of their government can provide, the responsibility for failure will surely be fixed where it belongs—on the present Speaker of the House of Representatives. It was he, it is understood, who refused to allow the bill to come to a vote, though it had passed the Senate and had been favorably reported by the Committee on Military Affairs of the House. On Speaker Cannon, and on Speaker Cannon only, must rest the responsibility for the continuation of the present unsatisfactory conditions and for what may occur in case of war.

WEST VIRGINIA OSTEOPATHIC BILL NOT PASSED.

It is a pleasure to correct the statement made in last week's issue of THE JOURNAL that the bill passed by the West Virginia Legislature was the bill introduced by the osteopaths, similar to the one introduced in so many states. Dr. Wm. W. Golden, President of the West Virginia State Medical Association, writes that the bill adopted in that state was a substitute bill, which was passed through the efforts of the state association. The bill adopted requires osteopaths to pass an examination before the regular board of examiners, which, in West Virginia, is the State Board of Health. The examination is the same as that given to physicians, except in practice and treatment, on which subjects provision is made for the board to call in an osteopath as an assistant in the examination. This is a much safer law than the one first introduced. In this connection, attention is called to the summary of osteopathic legislation for 1907, which will be found in the department of Medical Economics in this issue. The danger to the public in the adoption of these bills, which are being persistently pushed by the osteopaths, is self-evident. State societies, and especially committees on medical education, should be alive to the situation and should use every means in their power to defeat these bills.

CONTAGION FROM RETURNED BOTTLES.

Physicians in Austria are reported to have found it necessary to specify that in case of refilling all prescriptions used in infectious diseases a new bottle shall be used. A number of suspicious cases of infection have emphasized the possible danger of infection from bottles taken from the sick room. In a recent case in this country a drug clerk raised the question whether or not bottles returned from scarlet fever patients might have been the cause of his taking the disease. The possibility is certainly a present one, especially if the bottle were wrapped in the patient's room and in paper that had been handled by the patient. The conveyance of any one of several diseases by this means should be borne in mind by physicians and pharmacists. The latter, to prevent error in the transmission of the number of the desired pre-

scription, could have a germicidal garbage-can, into which the messenger could drop the bottle after having held it up for the reading of the number by the pharmacist. The danger is not a pronounced one, but in epidemics every precaution should be taken.

AN OBJECT LESSON FOR LEGISLATORS.

The lower house of the Missouri Legislature now in session was stampeded recently by the discovery that one of its members was suffering from smallpox of a mild type which did not prevent him from occupying his seat. Since then a number of members have been attacked by the disease, and the safety of important party measures has been threatened by the absence of the victims. There are many rabid anti-vaccinationists in Missouri, and while, so far as we are aware, there is no pending legislation instigated by them, as in other states, the present condition of affairs affords an object lesson which may possibly be effective in preventing such measures in the present and possibly in some future legislatures. Of course, impressions produced by epidemics or disease outbreaks do not last forever, but as a rule they serve a purpose in stimulating sanitary zeal, and, while the medical profession does all it can to prevent epidemics, there is no reason why it should not utilize their occurrence to point a moral or adorn a tale. It is to be hoped that the smallpox outbreak in the Missouri Legislature will have a not unfavorable effect as regards the medical legislation now before that body.

PURE FOOD IN WEST VIRGINIA.

West Virginia is among the states which need a pure food law, and those who have the good of the public at heart are endeavoring to secure one. But, as usual, they have little cooperation from the newspapers. When the governor, in his message, urged the enactment of such a law every Wheeling paper omitted from the publication of the message what he said on this subject. "By request" one paper printed the governor's views several days later. This is just one indication of the opposition to be met in West Virginia. It is worth a great deal to have a governor outspoken on the side of pure food, and the governor of that state undoubtedly represents the views of the vast majority of the public when he says[1]: "It certainly is the highest duty of the state to protect its people against the iniquities aimed at in pure food legislation. Such legislation should include the sale of 'patent medicines,' which is one of the greatest frauds practiced on the people. Many of these so-called remedies are poisonous, deleterious to the human organism, and their sale is worse than obtaining money under false pretenses. On the label of every 'patent medicine' there should be required to be stated in plain language the stuff of which it is composed." Certainly the profession and those of the public who are not financially interested in the manufacture, sale or advertisement of nostrums agree with the governor, and we trust that they have become sufficiently aroused to demand and to secure the necessary legislation.

1. West Virginia Med. Jour., February, 1907, p. 185.

PHOTOGRAPHING AND WEIGHING THE SOUL.

Some twenty years ago the Chicago *Times*, which is no longer in existence, contained a two-column account from a correspondent in a western town regarding the photographing of the soul as it left the body. The correspondent graphically described the whole affair, giving in detail the modification made in the camera for the purpose, the special artificial light required and how it was obtained, the name of the individual, the disease of which he died, the name of the street and the number of the house and everything necessary to carry conviction that it was a record of an actual occurrence. Of course, the experiments were successful and a good photograph of the soul was obtained. The story took, was copied all over the country and commented on seriously. We are reminded of this by a report of similar experiments. During the past week the newspapers have contained an account of some remarkable experimental work conducted by a homeopathic physician of Haverhill, Mass. This gentleman had been pondering on the ponderability of the human soul and, to satisfy a craving for knowledge regarding this intangible but important nature of man, proceeded to weigh it. Just how he did it or what scales he used are details not furnished. It would be interesting to learn just how he knew when the soul left the body. As to this point, our Massachusetts scientist might have been aided in his experimental work had he known that he could obtain the cooperation of the gentleman who knew the facts, if he did not perform the experiments, regarding the photographing of the soul. We should be glad to give our Massachusetts friend the name of the gentleman who wrote the report for the Chicago *Times*, as he is still living and active. It is a pity that the two can not be brought together, for if we could get the soul weighed and photographed at the same time it would be laying a foundation for other investigations regarding this all important subject.

THE ANTITUBERCULOSIS CAMPAIGN.

The wide interest now being taken, both by the medical profession and the public at large, in the prevention and cure of tuberculosis has been the basis of previous editorial comment. Any means that may further stimulate professional and public interest in this subject is worthy of notice. Such a means is to be found in the report[1] recently issued by the government, in which is given a brief history of the fight made by federal and state authorities against the scourge of tuberculosis. National action has followed, rather than preceded, state activity, and the report gives a list of the states which have taken official action looking to the control of the disease, and gives, also, the dates of the beginning of the movement in those states. Twenty-nine states are thus listed and to Pennsylvania belongs the distinction of being the pioneer, having as far back as 1885 begun a crusade against tuberculosis. A résumé of the work done in each of the states and a list of the various state sanatoria make the report one of great value to those interested in this important subject.

1. Public Health Reports of the U. S. P. H. and M.-H. Service, Washington, D. C., March 2, 1907.

Medical News

ILLINOIS.

Unlicensed Doctor Fined.—William J. Black, Rockford, charged by the State Board of Health with practicing medicine without a license, did not appear when his case was called March 5, and was fined $200.

Personal.—Dr. John F. Snyder, Monroe Center, was rendered unconscious by being thrown from his buggy in a runaway accident February 24.——While driving across the railroad track the buggy of Dr. Jay A. Logan, Bartonville, was struck by an engine. Dr. Logan was thrown about 20 feet, escaping, however, with slight injuries.——Dr. Alvin N. Keith, Peoria, is suffering from a severe attack of motor aphasia.——Dr. Charles E. Crawford, Rockford, has been appointed by the State Board of Health, inspector for the northern district of Illinois.——Dr. John W. Tope, Oak Park, has broken down from overwork in connection with the new Oak Park hospital.

Legislative Progress.—There has been no change in the status of the four osteopathic bills referred to in previous issues of THE JOURNAL, viz., Senate bill No. 21, and House bills Nos. 66, 318 and 319. The legislative committee of the state medical society and the State Board of Health feel that they will be able to prevent the passage of these bills, but they desire to receive the support of the organized profession. These organizations are also opposing the optometry bill (House 256), and the antivivisection bill (Senate No. 267), both of which are similar to the bills of like name that were killed in 1905. Senate bill No. 341 and House bill No. 474, introduced respectively by Senator McKenzie of Jo Daviess County and Representative Krape of Stephenson County, would repeal the itinerant-vendor section of the medical practice act, and permit the unrestricted practice of all "proprietary" medicine men who pay a tax of $75 a year. Senate bill No. 341 has been rapidly advanced and is now on its third and final reading. Senate bill No. 377 and House bill No. 536 contain "jokers," which are not perceptible to the casual reader. These bills would revise section 7 of the medical practice act and omit two words, e. g., "material remedy" and thus would permit unrestricted practice of "magnetic healers" and others who profess to treat by mind, magnetism and manipulation. The State Board of Health has had introduced a bill (House No. 468), making necessary amendments to the State Board of Health act. This bill, which has been favorably recommended by the committee on sanitary affairs, is now on second reading. It is the intention of the board to have introduced also a bill covering defects in the medical practice act. This bill has been wisely held back in order to let those opposed to the medical practice act show their intentions.

Chicago.

Interne Examinations.—At the annual interne examinations at Cook County Hospital, which began March 11, 111 applicants appeared. The examination continued through three days. The appointment of those who are successful will be made in July.

Ambulance Service.—During the first week of the ambulance service under the care of the department of health, the surgeons treated 60 sick and injured persons, and 226 patients were given first aid, of whom 183 were removed to the hospital and 37 taken home. Two insane persons were cared for and 9 dead bodies removed.

Deaths of the Week.—During the week ended March 9, 650 deaths were reported, 136 fewer than for the previous week, and 43 more than for the corresponding week of 1906, equivalent to an annual mortality of 16.08 per 1,000. The principal death causes were: Pneumonia, 125; consumption, 82; heart disease, 53; nephritis, 41, and violence (including suicide), and acute intestinal diseases, each 29.

Communicable Diseases.—The chief medical inspector reports that during the week 115 cases of diphtheria, 240 cases of scarlet fever and 130 cases of measles were reported to the department of health. This is a reduction of 26 in the number of diphtheria cases and 20 in the number of scarlet fever cases as compared with the previous week. The total number of infectious diseases reported was 495, or 35 fewer than last week.

Personal.—Dr. Gottfried Koehler stood at the head of the list as the result of the examination for chief food inspector.——Dr. and Mrs. Philip H. Matthei celebrated their fiftieth wedding anniversary March 5.——Mr. M. A. Lane, formerly of the department of anatomy at the University of Chicago, has taken charge of the histology work at the Turek Institute, and Prof. Conrad Jacobson, professor of physiologic chemistry at Armour Institute, has accepted the position of food analyst.

INDIANA.

Nostrum Advertisements on Wrapping Paper.—The Cass County Medical Society, at a recent meeting, passed resolutions requesting local druggists not to use paper containing "patent-medicine" advertisements for wrapping medicines dispensed on prescriptions, and stating that, if necessary, the society will furnish plain paper to the druggists.

Personal.—Dr. and Mrs. Samuel D. Weir, Terre Haute, are taking a trip to Florida and Cuba.——Dr. William J. Sandy has been appointed secretary of the board of health of Martinsville, vice Dr. A. Salem Tilford, resigned.——Dr. Frank Broughton has resigned as secretary of the Waterloo board of health.——Dr. William Flynn, Marion, has gone to Porto Rico for two months.

Ill and Injured.—Dr. Charles S. Stewart, Auburn, is reported to be dangerously ill from hemorrhage.——Dr. Charles E. Patrick, Indianapolis, who has been seriously ill with nephritis, is reported to be convalescent.——Dr. Martin V. McKinney, Charlestown, was declared insane in the Clark County Court, February 20.——Dr. Ira L. Brown, Alamo, is suffering from cerebral hemorrhage.——Dr. Edwin M. Trook, Marion, has had a severe attack of influenza.

Epidemic Diseases.—Fifteen employés of the Chicago, Lake Shore and South Bend Railroad are under quarantine at New Carlisle, on account of smallpox. Three cases of the disease have appeared.——An epidemic of measles in severe form is reported from Muncie and Delaware Counties.——Nearly 100 cases of measles are reported at Knightstown.——On account of the prevalence of scarlet fever, four rooms of the Hibberd school, Richmond, have been closed.——Michigan City is said to be threatened with an epidemic of typhoid fever.——It is reported that more than 1,000 cases of influenza exist in Evansville.

Sanitary Enactments.—The following sanitary enactments have been passed by the legislature: A bill appropriating $30,000 with which to buy 500 acres of land for a State Hospital Farm, which will be the state institution for the treatment of tuberculosis. The money is immediately available and the governor is to appoint a commission to select the land.——A new statistical law which will require the State Board of Health to collect records of births, contagious diseases and marriages. The death records of the state since 1900 have been very accurate because of a peculiar penalty in the law which provides that "in the event of a burial without a permit, as required in this act, then the coroner shall disinter the body, hold an inquest and make report of his findings within three days to the nearest health officer."——A law requiring cities, towns and counties to furnish free antitoxin to those too poor to purchase it. The State Board of Health is required to furnish blanks which are to be filled out by physicians for free antitoxin, and the blanks are a claim on the city, town or county in which the antitoxin is required. In the event of a physician abusing the law or securing antitoxin falsely, he is liable, for the first offense, to a fine of $50, and for the second a fine of $100 and imprisonment at the discretion of the court.——A pure food bill along the lines of the national food and drugs act, providing $15,000 for enforcement. A large food laboratory has already been established, with a competent food chemist in charge. There are three assistant chemists, two clerks and four inspectors. The inspectors will also be made deputy state health officers. This law contains one section in regard to slaughterhouses which will make it possible to promote sanitary conditions all over the state in this industry, and will do away with the insanitary slaughterhouses at present so common. Under the section it will be unlawful to sell the carcass of any animal for human food which has been slaughtered, prepared or handled under unsanitary conditions. Such carcass can be seized by the health officer and the sale stopped.——On account of these new laws it will be necessary for the State Board of Health to issue a new book of instructions to health officers, also to pass new rules establishing standards for the pure food law. The physicians of the state are much gratified over these salutary laws, and feel that the State Board of Health and its efficient secretary, Dr. John N. Hurty, deserve much credit for their efforts.

IOWA.

Smallpox.—Keosauqua reports nine cases of smallpox.——Seven cases of smallpox in five families near Postville are reported.—Several families at Loveland are quarantined and the public school is closed.——Smallpox in the family of the station agent at Alta has caused the quarantine of the station.

Surgical Society Formed.—The Iowa Surgeons' Clinical Society was recently organized at Des Moines and the following officers were elected: President, Dr. Alanson M. Pond, Dubuque; vice-president, Dr. William W. McCarthy, Des Moines, and secretary-treasurer, Dr. David S. Fairchild, Jr., Clinton. Meetings of the society are to be held every three months.

Personal.—Dr. Henry E. W. Barnes, Creston, has decided to locate in Santa Ana, Cal.——Dr. Frederick P. Bellinger, Council Bluffs, is taking a trip to Peru, South America.——Dr. Daniel H. Killingsworth, Clarinda, was recently operated on in New York.——Dr. James M. Boothby, Dubuque, is reported to be seriously ill with hemorrhage of the lungs.——Dr. George E. Decker, Davenport, has been appointed a member of the State Board of Health, vice Dr. Robert E. Conniff, Sioux City.——Dr. E. R. Walker, Princeton, has been appointed assistant surgeon of the Iowa Soldiers' Home, vice Dr. William M. Morton, Iowa Falls, resigned on account of ill health.——Dr. Peter A. Bendixen, Davenport, has been appointed assistant local surgeon for the Chicago, Milwaukee & St. Paul Railway.——Dr. Frederick E. Welsh, Rutland, has returned from a trip to New Mexico.

KENTUCKY.

Pure Food.—R. M. Allen, secretary of the Kentucky Pure Food Commission, made an address on pure food before the women's clubs of Louisville, March 6, in which he made an extensive exhibit of adulterated food products, described the work of the commission, and made a strong plea for pure food.

Inspection of Dairies.—At a conference held March 6 at Louisville, between members of the State Board of Health, its advisory committee, and representatives of the dairymen of Shelby County, plans were formulated for a series of dairy inspections throughout the state, to begin April 2. The work will be initiated at Shelbyville and then the dairies of Louisville and Jefferson County will be investigated.

Nostrum Recommendation.—Health Officer Dr. Maverell K. Allen, Louisville, has been considerably upset by the recommendation of a "cure" for consumption written by an employé of the health department on the official stationery on which Dr. Allen's name appears. This has been taken by a number of people as an advertisement bearing Dr. Allen's recommendation, and he has been kept busy explaining the matter.

State Board of Health.—The governor has appointed an advisory committee to the State Board of Health composed of the following: Morgan Hughes, Bowling Green, vice-president of the State Farmers' Institute; H. D. Rodman, Shelbyville, president of the State Dairymen's Association, and R. McDowell Allen, Lexington, secretary of the Kentucky division of the Interstate Pure Food Standard Commission. The appointees, in addition to their advisory position, will specially represent their organizations on the State Board of Health.

Unprofessional Conduct Cases.—At a hearing before the State Board of Health, March 6, charges of unprofessional conduct preferred against Dr. Sarah A. Murphy, Louisville; Dr. Robert T. Rudd, Fulton, and Dr. William R. Rubel, Smith's Grove, were considered. Dr. Murphy was granted a continuance of 40 days, with the understanding that after her trial in the criminal court for criminal malpractice she would agree to the revocation of her license as a medical practitioner. The license of Dr. Robert T. Rudd was revoked for two years and a continuance was granted in the case of Dr. William R. Rubel on account of the presentation by his attorney of a temporary restraining order, issued by the Warren circuit court.

LOUISIANA.

Personal.—Dr Frederick C. Mayer, New Orleans, has been traveling in Mexico, Yucatan and the West Indies generally, as medical inspector of the Louisiana State Board of Health, with reference to the yellow-fever situation and quarantine.

Visiting Nurses' Association to be Formed.—At a meeting held recently at the Jewish Orphans' Home, New Orleans, over which Miss Edith Loeber presided as chairman, a movement was inaugurated to institute a system of visiting nurses, similar to that already in operation in other large cities of the country.

Compromise on Quarantine Question.—A temporary compromise has been reached on the quarantine question, a provision of which is that Dr. Clifford H. Irion shall proceed to Washington to confer with the Secretary of the Treasury and the Surgeon General of the Public Health and Marine-Hospital Service looking to a satisfactory arrangement between the state and federal authorities for a lease of the quarantine station for a limited time.

MARYLAND.

Baltimore.

The City's Mortality.—The mortality for the week ended March 9 was unusually high, being equivalent to an annual death rate of 23.38 per 1,000. The deaths from pneumonia and tuberculosis were unusually numerous. Accidents caused 16 deaths and measles 4 deaths.

College Anniversary.—The twenty-fifth anniversary of the founding of the Women's Medical College was celebrated February 26. Addresses were delivered by Dr. Guy L. Hunner, president of the faculty; Dr. Charlotte L. Murdoch, late of London, and Hilda L. Fletcher, a member of the graduating class. The annual oration was delivered by Dr. Lewellys F. Barker. Since the founding of the institution in 1882, 93 women have been graduated who are in practice in nearly all parts of the world. The college now has 35 students with a graduating class of seven.

Personal.—Dr. Eugene R. Smith is traveling in Palestine and Egypt this month. In April he will go to Italy, France and England.——Dr. L. McLane Tiffany is in Florida.——Dr. S. R. Barr, superintendent of the Baltimore and Ohio Railroad Relief Department, has gone to Southern California for a month for his health.——Dr. Hubert Richardson, lecturer on physiologic chemistry, neurology and psychiatry at the University of Maryland, who recently inherited an estate by the death of a relative in England, has resigned his position and returned to his former home.——A gold-mounted baton was presented to Dr. B. Merrill Hopkinson, director of the Madison Avenue Temple choir, March 1, by the members of the choir.

McCormack in Baltimore.—Dr. J. N. McCormack, chairman of the Organization Committee of the American Medical Association, visited Baltimore, February 28, and was the guest of the Medical and Chirurgical Faculty of Maryland at the University club. He was entertained at lunch by Dr. Hugh H. Young, and in the evening was the guest of honor at a dinner given by Dr. Hiram Woods, president of the faculty. In the afternoon he delivered an address before the members of the profession, and in the evening delivered a public lecture at McCoy Hall on "Things About Doctors That Doctors and Other People Should Know." The Governor of Maryland presided at the public meeting and addresses were made by the president of the school board, the president of the Board of Charities and Corrections, and others.

MASSACHUSETTS.

Deaths in the State.—The census covering 1901-1905 inclusive, shows that in 1905 the death rate in Massachusetts was 16.8 per 1,000. Deaths from tuberculosis in Boston were 201.6 per 100,000; from cancer in Massachusetts were 89.3 per 100,000, and in Boston, 105.6 per 100,000.

Fire in Hospital.—By the calmness and bravery of the nurses and attendants at the Newton Hospital, a panic was prevented when a fire was discovered in the basement of one of the hospital buildings February 22. Fortunately, the fire, which was in the administration building, was soon brought under control.

Epidemic Diseases.—Methuen reports 128 more cases of communicable diseases in 1906 than in the previous year.—— At Gardner two additional cases of scarlet fever were reported March 1, and 20 pupils of the public schools who showed symptoms of the disease were ordered to remain at home for observation.

War on Consumption.—The Lawrence board of health has issued a small pamphlet, prepared by the Boston Association for the Relief and Control of Tuberculosis, containing, in brief succinct paragraphs, directions how to prevent consumption, the things bad for weak lungs, the things good for weak lungs, and directions in regard to the special care of households and children.

May Exclude Unvaccinated.—The full bench of the Supreme Court of Massachusetts has decided recently that the school authorities have a right to exclude from school unvaccinated children even when a physician's certificate of unfitness for vaccination is presented, if there is an epidemic of smallpox in the district. The case which was so decided occurred in Hyde Park in 1902, and his been in the courts ever since.

Legislation Against Harmful Drugs.—Dr. Ezra W. Clark, Brockton, representative in the legislature, has introduced a bill providing that morphin or its derivatives shall not be sold except on a physician's prescription, and only once on a prescription, and that on the label there shall appear whether the substances contain morphin, codein, opium, heroin, chloroform, cannabis indica, chloral hydrate, acetanilid or their derivatives.

Appointments.—Dr. Henry Pickering Bowditch has been made George Higginson professor of physiology, emeritus, from September, 1906, at Harvard University Medical School.——The following changes have been made in the staff of the first battalion, field artillery, M. V. M.; Captain George Osgood, Boston, has been made surgeon with the rank of major, vice Major John F. Harvey, Boston, retired; Dr. Edward B. Seever, Jr., Boston, has been appointed assistant surgeon with the rank of first lieutenant and Dr. J. Forrest Burnham, Lawrence, has been made hospital steward.

Medical Society Meetings.—At the annual meeting and banquet of the Eastern Hampden Medical Association, held in Springfield, February 28, the following officers were elected: President, Dr. Irving R. Calkins, Springfield; vice-president, Dr. Halbert G. Stetson, Greenfield; secretary-treasurer, Dr. Morgan B. Hodskins, Monson, and censor, Dr. Abbott L. Cooley, Chicopee Falls. At the banquet Dr. Leslie H. Hendee, Pittsfield, was toastmaster. The principal speaker was Dr. Vincent J. Irwin, Springfield, retiring president, who delivered a valedictory address on "The Doctor and the Doctor's Wife."

Personal.—Dr. Mary T. Bissell, superintendent of the North Adams Hospital, has resigned.——Dr. Henry J. Millard, North Adams, has been elected medical inspector of the Massachusetts department of the G. A. R.——Dr. Charles H. Thomas has been elected chairman of the Cambridge board of health.——Dr. Samuel T. Orton, Boston, has taken charge of the pathologic department of the Columbus (Ohio) State Hospital, vice Dr. Isbel Bradley.——Dr. David Cheever has been elected president of the class of 1901, Harvard University Medical School, and his engagement to Miss Jane W. Sargent is announced.——Dr. Walter C. Seeleye, Worcester, has been elected secretary of the Amherst Alumni Association.——Dr. Fred G. Bushold has been elected milk inspector for Lawrence, vice Dr. Patrick J. Hughes.

Medical Bills.—Among the medical and public health matters which are before the state legislature are the following: The osteopaths have been given leave to withdraw a petition for the establishment of a state board of osteopathic examination and registration; a bill providing for the appointment of school nurses for Boston has been cordially supported by many physicians before the committee on cities, as has also a bill directing the school committee to take charge of the physical training of children in school yards, playgrounds, parks, etc., during vacation seasons as well as other parts of the year; two bills directed against christian science practice have failed to pass the committee; a bill on the petition of Dr. Richard C. Cabot seeking more exact labeling of "patent" or proprietary drugs and foods has been approved by the committee; a bill urged by Dr. Charles E. Harrington of the State Board of Health, providing that the certificate of exemption from vaccination of a pupil in the public schools must be signed by the school physician assigned to that school was most vigorously opposed by anti-vaccinationists, and the committee has modified the recommendations by simply adding to the present law the words that the certificate shall be "granted for cause stated therein." Hence, if adopted, the law will read: "A child who has not been vaccinated shall not be admitted to a public school except on presentation of a certificate granted for cause stated therein, signed by a regular physician, that he is not a fit subject for vaccination."

MINNESOTA.

Clinical Hospital Donated.—Walter J. Trask, Los Angeles, has offered $114,000 to the University of Minnesota for a clinical hospital to be known as the Elliot Memorial Hospital in memory of Dr. Adolphus S. Elliot and Mary S. Elliot, his wife.

Scarlet Fever.—As the result of an outbreak of scarlet fever at Tower the school board has closed the schools for a week. Two deaths have occurred from the disease.——Bruno is suffering from a severe attack of scarlet fever which has caused the schools to be closed. Three deaths are reported.

Personal.—Dr. Gustav A. Renz has been appointed health commissioner of St. Paul, vice Dr. Justus O'Hage.——Dr. Fletcher W. Penhall, Morton, was seriously injured by being thrown from his carriage February 17.——Dr. Emil H. Beckman, city physician of Minneapolis, has resigned to accept a position in St. Mary's Hospital, Rochester.

MISSOURI.

Hospital Saturday and Sunday.—At the annual meeting of the Hospital Saturday and Sunday Association, St. Louis, it was reported that the total receipts from the collections during 1906 were $39,574.77 and the receipts from member's dues $407. On Christmas the amount distributed to hospitals was $38,734.81.

University Medical Department.—A conference regarding the state university medical department was held recently at Kansas City between committees of the legislature, the curators of the university and Mayor Beardsley, relative to the conditions under which the third and fourth year medical classes from the university will be brought to Kansas City. The curators require a bonus of $150,000, land in the vicinity of the General Hospital building and exclusive clinics at the General Hospital.

Personal.—Dr. John Young Brown, St. Louis, has resigned as superintendent of the City Hospital, to take effect April 1. He has been appointed professor of clinical surgery at St. Louis University and chief surgeon at St. John's Hospital, vice Dr. A. Van Liew Brokaw, deceased.——Dr. James Romine, Kansas City, is reported to be seriously ill at a Hospital in Wichita.——Dr. Harry T. Randle, Clayton, has been appointed a member of the medical staff of the United Railways Company.——The residence of Dr. W. B. Prim, Deerfield, was burned to the ground March 2.

Smallpox.—On account of the prevalence of smallpox in Jefferson City, the mayor issued a proclamation on February 26 closing theaters, skating rinks, dance halls, and all places of public amusement.——A detention hospital has been established near Jefferson City.——Several cases of smallpox are reported among the factory girls in St. Joseph.——It is reported that there were 50 cases of smallpox in Jefferson City before the first case appeared in the House of Representatives.——The local board of health of Jefferson City issued an appeal to the State Board March 3, asking it to revoke the order closing places of public amusement. The appeal states that during the six weeks of the epidemic there were 38 cases of smallpox, all in modified form; that all cases have been clearly traced to the same foci of infection; that the epidemic is completely under control; that at present there are but 27 cases in the city, and that ten patients would be on that day discharged.

NEW YORK.

Applies for Pardon.—An application has been made for a pardon for Dr. Edward F. Conrad of New York, who in May, 1905, was convicted of criminal malpractice by the New York County Medical Society and sentenced to prison for from one to two years. He wishes to be restored to citizenship and to be permitted to resume the practice of medicine. Decision on the application has been reserved.

Medical Societies Agree on Single Standard.—It is regarded as a matter for congratulation that an agreement has been reached whereby the different medical societies have decided to accept the legislation creating one medical board. The osteopaths are to pass a medical examination after 1910, and no one is to be permitted to practice osteopathy unless he has taken a three years' course of nine months a year in a recognized school of osteopathy.

Bills Introduced in the Legislature.—The following bills of interest to the medical profession have been introduced in the state legislature: An act to amend the agricultural law, relative to the sale of slaughtered game, animal or fowl that shall have been kept in cold storage, provides that after 15 days such products shall have attached thereto in plain letters the words "Cold Storage," or that there shall be a conspicuous sign over the place of sale, in black letters at least four inches long with the words "Cold Storage" thereon.——An act to amend the public health law, in relation to pharmacy, limiting the application of the article, which is not to apply to the practice of a practitioner of medicine who is not the proprietor of a store for the dispensing or retailing of drugs, medicines and poisons, it shall not prevent practitioner of medicine from supplying their patients with such articles as they may deem proper, and except as to the labeling of poisons it shall not apply to the sale of medicines or poisons when not for the use or consumption of the purchaser for destroying insects or any substance for use in the arts, or to the manufacture and sale of proprietary medicines or to the sale by merchants of essences and substances in general use.——An act to provide for the keeping of medical and surgical appliances in railroad cars, which provides that every passenger car shall have a medical and surgical chest, containing plasters, bandages, absorbent cotton, gauze and all necessary appliances for emergency use; that each chest shall have attached thereto, printed in conspicuous type, a card of instructions containing in plain and simple language the mode and use of the various articles above enumerated. Violation of this law incurs a penalty of $5 per car for each day that such violation shall continue.——An act to amend the labor law, relative to confectioneries, provides for the drainage,

plumbing and proper ventilation of all buildings or rooms occupied as biscuit, bread, macaroni, spaghetti, pie or cake bakeries. ——An act to amend the penal code in relation to crimes against the public health and safety, with reference to the sale of poisons, which provides that it shall be unlawful for any person to sell at retail or furnish any poison named in the schedule without affixing or causing to be affixed a label containing the name of the article and the word "poison" distinctly shown, with the name and place of business of the seller, all printed in red ink, together with the name of such poison printed or written thereon in plain, legible characters.

New York City.

Outdoor Department Opened.—The Jewish Maternity Hospital, 270 East Broadway, has opened its outdoor department and applicants are received daily except Sunday, from 3 to 5 p. m.

No Danger of Diphtheria Epidemic.—The two internes ill with diphtheria who were taken from Bellevue Hospital to the Minturn Hospital, are reported to be entirely out of danger, and the three other internes who were under suspicion are said not to have the disease, so that there is no danger of an epidemic as was feared by some.

Lecture on Tropical Medicine.—The Society of Tropical Medicine will hold its first meeting in New York at the New York Academy of Medicine, March 29. Dr. Louis L. Seaman, who has recently returned from a trip to Central and Eastern Africa, will be one of the speakers and will give an address on the hygienic conditions and the diseases which he observed during this trip.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended March 2, 418 cases of tuberculosis, with 192 deaths; 326 cases of measles, with 6 deaths; 301 cases of diphtheria, with 51 deaths; 297 cases of scarlet fever, with 17 deaths; 51 cases of whooping-cough, with 7 deaths; 41 cases of typhoid fever, with 9 deaths; 14 cases of cerebrospinal meningitis, with 12 deaths; 4 cases of smallpox, and 86 of varicella, making in all 1,538 cases, with 294 deaths.

The Bulkley Lectures.—The governors of the New York Skin and Cancer Hospital announce that Dr. L. Duncan Bulkley will close his clinical course with four special lectures as follows: March 27, "Practical Points in the Diagnosis and Treatment of Diseases of the Skin;" April 3, "Errors in Diagnosis and Treatment; Don'ts in Dermatology;" April 10, "Danger Signals from the Skin;" and April 17, "The Significance and Treatment of Itching." A lecture is also announced on April 24 by Dr. William Seaman Bainbridge on "Some Phases of the Cancer Problem." The lectures will be given in the outpatient hall at 4:15 p. m.

Public Hearing on the Milk Question.—The health committee of the board of aldermen gave a public hearing March 7 on the project of compelling by ordinance the pasteurization of all the milk sold at retail or wholesale in this city. The ordinance provides that after June 1 no raw milk or cream shall be sold at retail or offered for sale in the city of New York, unless it comes from herds certified as free from tuberculosis, and unless the milk or cream has been certified by the department of health, as containing not more than 50,000 bacteria to the cubic centimeter. All milk and cream not conforming to this standard shall be pasteurized by exposure to a temperature of 167 degrees for at least 30 minutes. For the purpose of enforcing this ordinance it shall be unlawful to offer raw milk or cream for sale unless thus certified or in cans on which the name of the dairy is distinctly named. It gives methods for examining herds and provides for bacterial examination by the board of health. Mr. Strauss was present and quoted from many eminent authorities to show the importance of pasteurization. A letter from the board of health was read stating that this body feels that its first and most important work is to supervise the conditions under which milk is produced, preserved, transported and sold. The board considers the ordinance defective in regard to the number of inspectors and to the bacterial and chemical examination. The board has under consideration further measures, but does not think it advisable at present to adopt partial or untried measures which are likely to delay or defeat the purpose in view. The board of health had for many years advocated sterilized or pasteurized milk for infants. The final hearing will be held in two weeks, when action will be taken.

NORTH CAROLINA.

Smallpox in College.—Smallpox appeared recently at the Boys' College, Oak Ridge, but the two patients were promptly quarantined and the entire community vaccinated.

Degenerative Legislation Checked.—A number of bills introduced in the legislature providing that "graduates of reputable medical colleges can legally practice medicine in the counties of Clay, Cherokee and Graham without securing a license from the State Board of Medical Examiners" met with the usual fate of such measures and were filed.

Personal.—Dr. Herbert A. Royster, Raleigh, entertained the faculty and members of the junior and senior classes of the University of North Carolina, Medical Department, at a dinner February 22.——Dr. Peter R. Hatch, Youngsville, is reported to be quite ill at his home.——The sophomore class of the Medical College of North Carolina was given a banquet by the president of the college, Dr. John Peter Munroe, February 22.

Society Meetings.—The Medical Society of North Carolina will hold its annual meeting at Morehead City-by-the-Sea on May 28, 29 and 30. On June 3 and 4 the Tri-State Medical Association of Virginia, North and South Carolina will hold its annual meeting at Norfolk, Va. This arrangement will make it convenient for the members to attend the American Medical Association, at Atlantic City, thus taking in the three meetings, with an absence of only about ten days from home.

OHIO.

Tuberculosis Hospital.—Work has been started on the new tuberculosis hospital which Cleveland will erect at Warrensville.

New Laboratory for Medical College.—The trustees of the Western Reserve Medical College, Cleveland, are preparing to erect a new laboratory for experimental mdicine, which is the joint gift of Col. O. H. Payne and H. M. Hanna. The structure will be of steel skeleton construction, with sides and roof of glass as far as practicable.

Society Meetings.—The physicians of Bryan have organized a society to be known as the Bryan Medical Association. The following officers were elected: President, Dr. John W. Riggs; vice-president, Dr. Daniel C. McTaggart, and secretary-treasurer, Dr. Malvin V. Replogle.——At a meeting of the Union Medical Association of the Sixth Councilor District, held February 21, at Akron, Dr. Robert D. Gibson, Youngstown, was elected president; Dr. John H. Seiler, Akron, secretary, and Dr. Harold H. Jacobs, Akron, treasurer.

Society Celebrates Semi-Centennial.—The Cincinnati Academy of Medicine celebrated its semi-centennial by a banquet at the Hotel Sinton, March 4, at which 350 were present. Dr. John E. Greiwe, the retiring president, was toastmaster and speeches were made by Dr. Bryon Stanton, the only charter member present, and others. The following officers were elected: President, Dr. Frank W. Langdon; vice-presidents, Drs. William Gillespie and John C. Oliver; secretary, Dr. Mary K. Isham; treasurer, Dr. Alexander G. Drury; librarian, Dr. Arch I. Carson; censors, Drs. John E. Greiwe, Edwin W. Mitchell and E. Gustav Zinke; and trustees, Drs. James F. Heady, Asa B. Isham and Nathaniel P. Danderidge. Dr. O. D. Norton, the oldest member, who is now 86 years old, was too ill to attend the celebration, but sent his greetings and farewell.

Personal.—Dr. Jacob A. Kimmell, Findlay, is making a visit to Panama and Central America.——Dr. Charles E. Sawyer, Marion, is critically ill at his home.——Dr. William T. Ramsey has been elected health officer of Cambridge.——Dr. Walter R. Griess, Cincinnati, has been elected assistant surgeon of the police and fire department.——Dr. Theodore W. Rankin is reported to be critically ill with typhoid fever at his home in Columbus.——Dr. Peter E. Joseph, Sr., Cincinnati, is reported to be critically ill with heart disease at his home.——Dr. Alvin L. Light, Dayton, has been appointed jail physician.——Dr. Samuel S. Wilson, Xenia, is taking a trip to Cuba.——Dr. Adams B. Howard, superintendent of the Cleveland State Hospital, has resigned.——Dr. Frederick Lahmere, Barberton, is reported to be seriously ill with typhoid fever.——The Cincinnati Academy of Medicine recently entertained Dr. George W. Crile, Cleveland, who spoke on transfusion of the blood.

PENNSYLVANIA.

New Miners' Hospital.—The secretary of the United Mine Workers has announced that Shamokin has been selected as a site for the new miners' hospital.

Railway Surgeons Meet.—At a meeting of the staff surgeons of the Pittsburg & Lake Erie Railroad, held in Pittsburg, the following officers were elected: President, Dr. John D. Milligan, Pittsburg; vice-presidents, Drs. William A. Shannon, Ellwood City, and John J. Allen, Monaca, and secretary-treasurer, Dr. Edward M. Iland, Coraopolis.

Personal.—Dr. J. Lawrence Eisenberg has been elected pathologist of Charity Hospital, Norristown, vice Dr. Fred N. Henderson, resigned.——Dr. Stoddard P. Gray, Chester, has been seriously ill with pneumonia.——Dr. William T. Davies, Jr., Harrisburg, has been elected first resident surgeon at the Miners' Hospital, Fountain Springs, to succeed Dr. Clay W. Weimar, resigned.——Dr. James M. Matthews, Reading, recently celebrated his ninetieth birthday anniversary.——Dr. Edwin S. Heiser, Lewisburg, sailed from New York for Europe, February 7.

Hearing on Vaccination.—All the so-called evils and alleged dangers to human existence were brought out March 5 by the State Anti-Vaccination League of Philadelphia at a hearing on the anti-vaccination bills now pending before the legislature. Stereopticon views showing alleged cases in which children have become infected from vaccination, resulting in death, were thrown on the screen and commented on by the secretary of the league. The anti-vaccinationists are not opposed to the vaccination of persons who desire to be inoculated with the virus, but they object most strongly to the compulsory vaccination of those children of the public schools of the state whose parents object to the inoculation. Health Commissioner Dixon, in addition to reciting the experience of foreign countries, like Germany, where smallpox has been virtually wiped out by vaccination, gave a number of cases that have occurred during his own term of office to prove how smallpox spreads among the unvaccinated. Drs. William M. Welch and Jay F. Schamberg, Philadelphia, delivered most convincing arguments and gave actual facts from the thousands of cases that they have treated at the Municipal Hospital to demolish the assertions of the anti-vaccinationists. Among the other speakers in favor of vaccination were Dr. Seneca Egbert, dean of the Medico-Chirurgical College of Philadelphia, and Dr. Joseph MacFarland of Philadelphia.

Philadelphia.

White Entertained.—The Franklin Inn Club entertained Dr. J. William White at an informal dinner March 1. Among those present were Drs. Hobart A. Hare, R. Tait McKenzie, Marshall Scull, John H. Musser, J. Chalmers Da Costa and Charles W. Burr.

Personal.—Dr. Alfred Gordon has been elected president of the Philadelphia Neurological Society.——Dr. Henry W. Stelwagon, who has been clinical professor of dermatology at the Woman's Medical College of Pennsylvania for 22 years, has resigned on account of pressure of private practice.——Dr. S. Weir Mitchell celebrated his seventy-seventh birthday anniversary February 15.

Visiting Nurses.—At the annual meeting of the Visiting Nurses Society, it was announced that if $15,000 can be raised, they will receive a gift of $10,000. According to the secretary's report 45,368 visits were paid last year—an increase of 7,086 over the previous year. In 1893, when the society was started, 10,000 visits were made to the sick poor. The visits reported do not include the work in the two day nurseries at the Starr Center, or that of the school nurses. Only graduates of hospital training schools are employed by the society, whose object is to give the best home nursing to the poor and those of moderate means. There is still great need of a nurse for special work in tuberculosis and for a night nurse to send to special emergency cases.

New Home for College of Physicians.—It was recently decided that the new home (see illustration on the next page) for the College of Physicians of Philadelphia should be at Twenty-second and Market Streets. The lot being 130 by 184 feet, with streets on three sides, gives an opportunity for the building to get a maximum amount of light and of fire protection. The college, which is a medical society and not a teaching body, was founded in 1787 by Benjamin Rush, John Redman (who was its first president) and others. In 1865 the present site was first occupied and the library of the society at that time was comparatively insignificant in size. To-day, according to the estimation of C. P. Fisher, the librarian,[1] it ranks third in size and importance among the medical libraries of the world. The beginnings of the library were made by donations from the members of the society and it owes much of its growth to the generous contributions that have been made either in the form of books or of money. The entire library endowment fund at the present time, the income from which is used for the purchase of books and journals, amounts to $60,965. This amount includes thirteen large funds, together with the gifts of a number of smaller subscribers. The growth of the library during the first seventy-five years of its existence was slow, so that in 1836 the library contained only 291 volumes and in 1866 9,513. Since that time its growth has been steady, the number of volumes nearly doubling itself every ten years. The present number of bound volumes is 82,305, of pamphlets 56,116, and of dissertations 20,978; 728 current periodicals are on the journal racks of the library. The catalogue is made on typewritten cards and is undergoing a thorough revision, about half of the work having been completed. This work is considered one of the finest examples of typewritten card indexes in existence. The library contains a large number of medical antiquities and curiosities, among which may be mentioned a copy of what is probably the first medical book printed (about 1470), the first edition of the first medical dictionary (1473), the first edition of the first book printed on diseases of the eye (1474). Altogether there are 123 books printed before the year 1500. The first medical publication in the colonies was a "broadside" or poster instructing the people of New England "how to order themselves and theirs in the small pocks or measles." As was mentioned in THE JOURNAL, Jan. 12, 1907, page 148, Mr. Carnegie offered to contribute $100,000 toward the new home on condition that an equal amount was raised by the society. This amount is now forthcoming, and the committee has been authorized to obtain full plans, specifications and bids. The new building alone will cost about $250,000, to which the cost of furnishing must be added. To Dr. S. Weir Mitchell, it is reported, more than to any other one man, is due the credit of this undertaking. Dr. Mitchell obtained the gift from Mr. Carnegie and also obtained about one-half of the entire amount subscribed.

1. An Account of the Library of the College of Physicians of Philadelphia, reprinted from the Transactions, third series, xxviii, 1906.

VIRGINIA.

Darlington in Richmond.—Dr. Thomas Darlington, health officer of New York City, recently delivered an address at Richmond on "The School Nursing and Medical Inspection of Schools," in which he spoke on some phases of the anti-tuberculosis work and gave the audience an idea of the importance and value of the work done by visiting nurses.

Personal.—Dr. Stark A. Sutton, Norfolk, assistant surgeon of the second battalion, Seventy-first Infantry, Virginia Volunteers, has resigned.——Dr. Philip T. Southall, assistant physician at the Eastern State Hospital, Williamsburg, has resigned.——Dr. Elisha Barksdale has been elected president of the Lynchburg board of health, vice Dr. Patrick H. Casey.——Dr. William W. Gill, city physician of Petersburg, has resigned and will locate in Chicago.

Society Seeks Repeal of License Tax.—At the annual meeting of the Wise County Medical Society, held at Norton, the following officers were elected: President, Dr. T. M. Cherry, Glamorgan; vice-presidents, Drs. William G. Painter, Big Stone Gap; Robert P. Carr, Norton, and George W. Tompkins, Georgell; secretary-treasurer, Dr. Henry M. Miles, Wise. It was decided that each member of the Wise County Medical Society contribute the sum of $1 to be used by the committee appointed by the State Medical Society to secure the repeal of the license tax, which sum is to be paid to treasurer of this society.——At a meeting of the Richmond Academy of Medicine and Surgery, the following officers were elected: President, Dr. Ennion G. Williams; vice-presidents, Drs. John S. Horsley, McGuire, Newton, and R. Bowman; secretary, Dr. Mark W. Peyser (re-elected); treasurer, Dr. L. K. Sheppard, and executive committee, Drs. Stuart McGuire, William S. Gordan, Daniel J. Coleman, and Ramon D. Garcin.

CANADA.

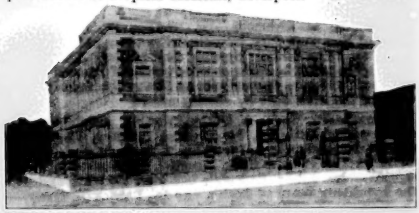
Vaccination.—The Toronto board of education has refused to reinstate compulsory vaccination, claiming that it is not its place to usurp the authority of the city's health officer.——Vaccination is gaining favor in Montreal. In 1906 4,217 persons were publicly vaccinated in that city. Of this number 121 were aliens or strangers. As a people the citizens are now about as well vaccinated as any other city in Canada, whereas only a few years ago but about 20 per cent. of the population was vaccinated.

Personal.—Dr. E. D. Hudson, of the house staff of the Winnipeg General Hospital, will commence practice in Hamiota, Man., in partnership with Dr. Alexander Lawson.——Dr. Henry Esson Young, Atlin, B. C., who has just been elected a member of the British Columbia legislature, has been called to the cabinet as provincial secretary.——Dr. Samuel C. Corbett, Winnipeg, has sailed for the Mediterranean.——Dr. G. B. Archer has gone to Bengal, India, to engage in missionary work.——Dr. Vaux, Toronto, has sailed for Naples, Italy.——Dr. Thomas A. Davies, Toronto, has gone to Europe for graduate work.

FOREIGN.

Bubonic Plague in Siam.—Since 1904 bubonic plague has been reported in various parts of Siam, but the diagnosis has always been based on either clinical symptoms or the simple examination of smears made from buboes or other organs. In the cases recently appearing in Phrapatoom, cultures and experiments on lower animals were made, including rubbing the organisms on the shaven skin and subcutaneous inoculations. By these methods a positive diagnosis of bubonic plague was made.

Dutton Memorial Professorship.—A research professorship in the Liverpool School of Tropical Medicine has been proposed as a memorial to Dr. Joseph Everett Dutton, who did valuable work in four successive expeditions sent out by this school to Nigeria, the Gambia, Senegambia and the Congo Free State. He described *Trypanosoma gambiense*, the parasite since recognized as the cause of sleeping sickness, and gained high distinction for himself and a world-wide renown for his school. While investigating tick fever, previously little known, he contracted that disease and died. The committee in charge of the fund say: "All who knew Dr. Dutton agree that the most fitting form which a memorial can take is one which will help to continue those researches in tropical medicine for which he gave his life." It is proposed to raise $50,000, and over $20,000 has already been pledged. The committee calls attention to the remarkable benefits conferred on commerce and travel by the additions to our knowledge of tropical diseases. The case of the Panama Canal is cited as one instance. Many problems are yet awaiting solution. Any contribution to this fund should be sent to Mr. A. H. Milne, Hon. Secretary, Liverpool School of Tropical Medicine, Liverpool.



Proposed New Home for College of Physicians of Philadelphia (see previous page).

Crocker's Suit to Recover the Fee Paid a French Physician.—The cable has reported that the French courts have rejected the plea of the American, Mr. Crocker, for restitution of the fee of $20,000 paid to Doyen in advance for treatment of Mrs. Crocker, who had an inoperable cancer. Doyen's serum treatment seemed to aggravate her condition and her husband discontinued it in a little less than a month, but did not formally dismiss Doyen until six weeks later. Some months after the death of his wife he instituted suit for recovery of the fee, saying that it was obtained under moral constraint, and that the sale of a therapeutic serum under these conditions is against the law, and that such a contract sale (*à forfait*) is also illegal. He further contended that as only a few applications of the remedy had been made, Doyen was entitled only to remuneration for the treatments actually given. The *Semaine Médicale*, February 27, gives the full text of the decision in the case, which is altogether favorable for the interests of the medical profession. It brings up a new point, namely, the conditions under which a physician has the right to employ as a means of treatment a new and non-standardized serum. The contract between Doyen and Crocker did not refer to the commercial exploitation of a new and secret remedy, but to a treatment in which a new serum was used. A treatment of this kind, given by a registered physician, the court said, does not conflict with the laws regarding the commercial exploitation of viruses and serums. Such a contract, entered into freely by the parties, is not illegal. That it was entered into freely by Crocker is shown by his engaging an agent to look after his interests, and by his not signing the contract till after considerable discussion. Doyen's part of the contract was to attend Mrs. Crocker, whom he stated to be "suffering from a recurring mammary cancer on the way to generalization, and inoperable, and which I hope to cure." He did not give any assurance that he could do so, but his success in a number of similar cases, he said, encouraged him in this hope.

LONDON LETTER.

LONDON, Feb. 23, 1907.

Admission of Women to the Diploma of the Royal College of Surgeons.

With that conservatism which is so prominent a feature of the British character, the Royal College of Surgeons has persistently refused to admit women to its examinations, although with that absence of logic which is equally a national characteristic, it allows women to use both the library and the museum of the college. At last there are signs that the fortress of prejudice is about to capitulate after a prolonged struggle. As long ago as 1895, an influential petition was presented to the Royal College of Physicians and Royal College of Surgeons asking that the examinations be open to the students of the London School of Medicine for Women. At that time there were over 200 women on the medical register and there was a steadily increasing demand for women practitioners. The petition was discussed by both colleges and in each case rejected by a very narrow majority—a majority of 9 in 109 in the case of the College of Physicians, and of 10 in 106 in the case of the College of Surgeons. The College of Surgeons has now voluntarily raised the question and appointed a committee to consider the admission of women to its examinations. As the examinations of the two colleges are conjoint it is scarcely probable that one will surrender without the other. Women physicians are preparing a petition to the Royal College of Physicians. They point out that at present English students are compelled to resort to the examinations of the Irish and Scotch colleges. In these countries hide-bound conservatism is not a national characteristic. The number of women on the medical register now amounts to 750, of whom more than 400 have been students of the London School of Medicine for Women. The petition also refers to the greatly increased recognition accorded to women in the medical profession, as shown by the number of appointments held by them at home and in India, Persia, Africa and Egypt. The petition is signed by the staff of the Royal Free Hospital (the London hospital attended by women students), and by a number of the foremost physicians and surgeons of the day. It is understood that the Royal College of Surgeons is taking advice on certain legal points raised by the question.

The Laziest Man on Earth.

An extraordinary case is reported from Belfast. A man named Thompson, who lives with his mother at Clare, Lurgan, went to bed in 1877, when he was a boy of 11, and did not leave it until three weeks ago, establishing a world's record for laziness. He was looked after by his mother, and his presence in the house was hardly known to the villagers. Probably he would have remained in bed for the rest of his life had not his mother been taken ill and had to be removed to the infirmary. Left helpless and alone Thompson was compelled to get up. A search was made for the suit which he discarded twenty-nine years ago, but he was unable to dress without assistance. Two neighbors were called in and the work of squeezing him into the suit occupied three men a whole evening. When dressed he was too tired to walk and an ambulance had to be brought to convey him to the infirmary. He reposed there until his mother was well enough to leave the infirmary, when he followed her home. He was compelled to walk, as the authorities refused an ambulance. Many physicians have attempted to stimulate Thompson out of his chronic lethargy. Irritating plasters were applied, but without effect; mild electric currents failed to ruffle him, and the physicians left him to enjoy the serene calm they were unable to disturb. Thompson is healthy and suffers only from chronic laziness. On returning home he again took to bed. A later report states that he has changed his mind and says that he will sleep less. The sight of the green fields and the busy world has awakened him to some interest in life. He says that he is determined to make amends for the wasted years in the past. However, no report has yet been made that he has made a move.

VIENNA LETTER.

(From Our Regular Correspondent.)

VIENNA, Feb. 25, 1907.

Nicotin-Poor Tobacco.

The abuse of tobacco has prompted medical authorities to recommend the production of tobacco in which the dangerous substances, especially nicotin, were either removed or rendered innocuous. The Austrian government, which has the monopoly of the tobacco trade, took the matter up, and began some time ago to produce special brands of tobacco which had been subjected to certain manipulations in order to comply with the wishes of certain parties. These tobacco brands were almost

entirely free from nicotin. The public, however, refused the article; it was not the tobacco from which they had been used to derive so much pleasure, and it was found that a certain percentage of nicotin must be retained in the tobacco leaves and smoke; otherwise the flavor and the peculiar taste of the leaves are sure to suffer. A number of patents were thereon taken out on processes of denicotinizing tobacco, the following methods being still in use by the government tobacco factories: For weak tobacco, from which a small quantity of nicotin is to be removed, an alcoholic lime solution is used. The chemical interaction results in the formation of insoluble lime salts of the malonic and citric acid, which latter are necessary for the flavor of the tobacco, while the nicotin and pyridin substances are mostly washed out. The smoke of such tobacco contains only 50 per cent. of nicotin in comparison with the smoke of the unwashed tobacco. Instead of lime a solution of potash may be used.

The latest patented process, which gives the best results and which is now adopted in the majority of the government factories, consists in heating the ready-made cigars and cigarettes to a temperature of nearly 200 degrees C. The advantage of this method lies in the fact that finished goods, even if they have been sold, can be subjected to the denicotinizing process. The idea underlying this method centers in the fact that nicotin, though boiling at 240 degrees C., can be distilled over at 150-200 degrees without boiling. Thus the cigars are placed in an air-tight vessel and dry warm air is allowed to circulate freely between them by means of a system of glass pipes. The nicotin and ammonia are extracted by the heat and are condensed in liquid form on the walls of the vessel, whence these substances are conducted away by a system of tubes. The temperature within the vessel is kept constant, varying according to the sort of tobacco employed. Tobacco subjected once to this treatment has the percentage of nicotin reduced by 20 to 50 per cent.

If treated two or three times the nicotin is reduced by 70 per cent., and treating it four times removes 95 per cent. of the poisonous alkaloid. But such tobacco is no longer pleasant to smoke, so that the government factory finally was content to extract only 50 to 70 per cent. As regards the physiologic action of such nicotin-poor tobacco, it has been found that in cases of tobacco amblyopia and other forms of tobacco neuritis, where total abstinence was not advisable for fear of bad effects, the habit of smoking could be kept up if this kind of tobacco was used; but even these had to be restricted to two or three per day. A curious by-effect, which was discovered by chance, was that in some cases of obstipation, smoking "nicotin-free" tobacco resulted in a cure. But whether *post hoc* or *propter hoc* is still a question.

Pharmacology

LACTOPEPTINE.

Report of the Council on Pharmacy and Chemistry of the American Medical Association.

The following report was submitted to the Council by a subcommittee:

We have devoted considerable time to the investigation of Lactopeptine (powder) and report as follows:

The label on the package contains this statement: "Lactopeptine contains the five active agents of digestion—pepsin, diastase (veg. ptyalin), pancreatin, lactic acid and hydrochloric acid—combined in the proper proportion to insure the best results."

Examinations demonstrated that more than 90 per cent. of Lactopeptine is milk sugar.

The amount of pepsin contained in Lactopeptine is somewhat less than 10 per cent. of official pepsin.

Careful examination failed to show the presence of either diastase or pancreatin.

Examination demonstrated a minute trace of chlorid only, therefore the preparation does not contain any appreciable amount of hydrochloric acid. The amount of lactic acid, calculated from the quantity of potassium hydroxid required for neutralization, was found to be 3 per cent.

From the above, it is evident that Lactopeptine (powder) is at least no more efficient as a digestive agent than the ordinary Saccharated Pepsin, official in the 1890 U. S. Pharmacopeia, but replaced in the present Pharmacopeia by the more active and dependable Pepsin.

These findings were submitted to the manufacturers of Lactopeptine, the New York Pharmacal Association, who, in their reply, stated: "Regarding the assertion that Lactopeptine does not contain pancreatin and diastase, we herewith confirm and reassert our statement that Lactopeptine is and has always been manufactured in accordance with the published formula and that the ferments referred to exist in the preparation as stated in the formula."

In view of these reasserted claims regarding the composition of Lactopeptine, another specimen was purchased in the open market. Its examination showed that it was of even poorer quality than the first specimen examined. The tests not only failed to show the presence of diastase or pancreatin, but also failed to show the presence of any appreciable amount of pepsin.

From these experiments, your subcommittee must conclude that Lactopeptine contains but small amounts of pepsin, that it contains no hydrochloric acid or mere traces only, and that it contains neither diastase nor pancreatin. Hence, the statements made by the manufacturers in regard to the composition of Lactopeptine are incorrect. Since the composition of Lactopeptine is not that given by the manufacturer, but, instead, corresponds to a weak saccharated pepsin, it is evident that the claims made as to its therapeutic value are unwarranted, exaggerated and misleading. It is, therefore, recommended that Lactopeptine be not approved. In view of the wide publicity given to the claimed composition and therapeutic value of the article, it is further recommended that this report be published.

The recommendations of the subcommittee were adopted by the Council, and in accordance therewith the report is published. W. A. PUCKNER, Secretary.

Reduced to a few words, the above report shows that—whatever the manufacturer may have put into it—Lactopeptine as it exists on the market was found by the subcommittee to be only equal to a weak saccharated pepsin, which has but one-tenth the digestive power of the official pepsin and that Lactopeptine at times is inert.

That the subcommittee which examined Lactopeptine could find neither diastase nor pancreatin was to be expected, since it has been demonstrated repeatedly that those ferments are destroyed by pepsin in the presence of acid. The examination shows that in the absence of solvents the presence of lactic acid still enables the destruction of pancreatin and diastase. That the manufacturers should have attempted to manufacture such an impossible product, and that the medical profession should have accepted it, is not creditable to either party concerned.

That the subcommittee should fail to find the hydrochloric acid claimed to be contained in the product was a foregone conclusion. If it is remembered that ordinary hydrochloric acid is a solution of hydrogen chlorid in water and that hydrogen chlorid itself is a gas, the absurdity of the claim that it is contained in a dry powder is apparent.

It is astonishing that physicians should so long have used a product about whose therapeutic value extravagant claims have been made, when the very statements in regard to its composition should have condemned it.

Kidney Remedies.

In THE JOURNAL, Feb. 9, 1907, page 534, we reproduced from the *British Medical Journal* analyses of several of the most widely advertised kidney remedies sold in Great Britain. The same publication now publishes a report of Warner's Safe Cure and other similar preparations.

WARNER'S SAFE CURE.

This preparation, according to the literature supplied by the manufacturers, is "purely vegetable," says the *British Medical Journal*, and this predilection on the part of the public for vegetable remedies is probably responsible for potassium nitrate being classed as a vegetable. Analysis of this remedy showed "the presence of potassium nitrate,

alcohol, glycerin, a trace of oil of wintergreen and vegetable extractive." No alkaloid or similar active principle was found and the extract had little distinctive taste or character, all its properties pointing strongly to its consisting largely of taraxacum, with some other extract containing a small quantity of tannin.

VENO'S SEAWEED TONIC.

The label on this preparation, according to our contemporary, states that the remedy "contains in a pleasant and agreeable form the active principle of seaweed . . . is prepared on an entirely new principle and is free from poisonous and mineral drugs." Analysis shows that the mixture contains "a small proportion of undissolved sediment, which, when collected and examined, agrees in all respects with the insoluble portion of leptandrin. Glycerin, a little phosphate, alcohol and a trace of chloroform are present and vegetable extractive. Careful examination of the latter gave evidence of the presence of the constituents of cascara sagrada, senna and rhubarb."

MUNYON'S KIDNEY CURE.

The label on this preparation is said to bear the words: "Cures Bright's disease, gravel, all urinary troubles, and pain in the back or groins from kidney diseases." It is stated that the pills were found to vary much in size, the average weight being 0.6 grain. Analysis showed them "to consist of ordinary white sugar; no trace could be detected of any alkaloid or other active principle, or of any medication. The sugar was determined quantitatively and found to be just 100 per cent. of the weight of the pilules."

Tucker's Asthma Cure.

This nostrum, which is applied by a special atomizer, is discussed by O. Anselmino (*Pharmaceutische Centralhalle*, Dec. 6, 1906), who states that he has determined by experiment the amount of fluid which is delivered by various instruments. His experiments show that at a single inhalation comprising 100 compressions of the rubber bulb about 0.15 gm. (2.5 minims) would be sprayed from the Tucker apparatus. Professor Strübing has shown that the amount may reach 0.40 gm. (6 minims), an amount which is of no small moment considering the composition of the remedy. The two analyses of Tucker's liquid for inhalation which have been made differ materially. That of Aufrecht, made in 1903, gives the following composition:

Cocain hydrochlorate	1 per cent.
Potassium nitrate	5 per cent.
Glycerin	35 per cent.
Bitter almond water	35 per cent.
Water	25 per cent.
Vegetable extractives (probably from stramonium)	4 per cent.

Bertram in 1905, on the other hand, found:

Atropin sulphate	1 per cent.
Sodium nitrate	4 per cent.
Vegetable extractives dissolved in water with some glycerin	0.52 per cent.

Anselmino found at one examination that hydrocyanic acid was present, but a second sample contained none. The former sample also contained a nitrite, but no potassium nitrate. The amount of alkaloid was 1 per cent., the greater part of which was cocain.

The inconsistencies in the analyses, they say, are partly due to the fact that proprietary remedies often vary in their composition from time to time and partly to difficulties inherent in the analysis of complex mixture. While atropin and cocain can be identified by characteristic qualitative tests, their quantitative determination is very difficult and, when the quantities are so small, it is practically impossible.

Bertram has proposed the following formula as a substitute for the inhalation liquid:

Atropin sulphate	gr. ll	15
Sodium nitrite	gr. viii	6
Glycerin	gr. xxx	2
Distilled water, to make	3ss	15

Mix and dispense in a bottle of dark glass. To be sprayed from an atomizer and inhaled for three minutes.

Anselmino thinks, however, that a 1 per cent. solution of atropin is not safe for frequent inhalation, as atropin poisoning may occur.

Correspondence

Hypertrophy of the Turbinate.

BROOKINGS, S. D., March 4, 1907.

To the Editor:—After reading with interest the article of Dr. Kuyk in THE JOURNAL of March 2, in which he describes his method of dealing with hypertrophy of the inferior turbinate, I am prompted to describe a method which has proved successful in my hands. The observations of Dr. Kuyk on such points as excessive removal of tissue, the destruction of the function of mucous glands, etc., are wise. I would discard entirely the cautery for this work and make use of methods which are more truly surgical. The class of cases in which the cautery is still advised I believe can be treated more satisfactorily and with fewer objectionable results by the method which I have been using. I refer to those chronically swollen turbinates which shrink under the application of adrenalin and give free breathing space. The turgescence is accounted for by a dilated condition of the turbinal cavernous tissue.

Submucous cauterization of such a turbinal seems to be even less rational than the old method of cauterizing through the mucosa. For some time I have made use of a submucous operation with a saw knife, a sketch of which is shown.

The tissues are anesthetized with a non-ischemic anesthetic, such as alypin. The mucosa is made clean as possible and just before making the incision the site is swabbed with a 1 per cent. solution of alphozone. The saw knife is inserted in the anterior end of the turbinal and carried as far back as may be desirable, hugging close to the bone. With a few sawing sweeps of the knife the adjacent cavernous tissue is broken down and the knife withdrawn, leaving a single opening of the size of the width of the knife. Free bleeding will occur, which will effectually settle any doubt as to possible infection, if ordinary asepsis has been observed. The nostril is then packed tightly with compressed cotton tampons. In two or three days' time the tissues have healed and remain permanently contracted without any external disturbance.

The advantages claimed for this method, which is recommended only in such cases as are mentioned above, are: 1, It is a clean operation; 2, it is simple in technic; 3, it takes but a moment of time, lessening pain and shock; 4, the after-treatment is so simple that there is practically none; 5, the pain and discomfort following cautery or open operation are almost entirely absent; 6, the function of the mucosa is not impaired.

No claim as to originality of the operation, other than the use of the saw knife, is made, the idea being to obtain the advantages of the submucous cauterization without the reaction and disturbance of function of mucosa which may follow.

J. G. PARSONS.

The Relation of a Scarlet Fever Epidemic to the Milk Supply.

EVANSTON, ILL., Feb. 17, 1907.

To the Editor:—As a matter of information you may be interested in knowing why the Evanston Branch of the Chicago Medical Society *unanimously* passed a resolution stating that in the opinion of its members almost the sole source of contagion in the recent epidemic of scarlet fever was infected milk.

Last August there were several cases of scarlet fever which we were satisfied came from infection in the milk supply of a certain company which obtained its milk from a point in a neighboring state. For a short time this company gave milk from another source, and furnished affidavits and statements to show that we were mistaken. Occasional cases occurred until Jan. 13, 1907. At that time this company was supplying less than one-seventh of the milk for Evanston, and from its Evanston depot. It also supplied from this depot Wilmette, Kenilworth, Rogers Park and Edgewater. On January 14, 15, 16, 17 and 18 there were reported over a hundred cases of scarlet fever in this territory. Whole families came down at once, and

even those supposed to be immune showed symptoms. It was noticed that nearly every case used milk from the company in question, and Dr. Parkes, our commissioner, at once prohibited more milk being brought from the locality previously referred to. I think no milk was brought here from that point after Thursday, January 17, and immediately there was a falling off in new cases. Within a week there were in Evanston city 137 cases, of which 99 per cent. showed connection with this particular milk supply. These cases were scattered, not being limited to any section of town (except as hereinafter stated), nor to any church, school or social set. The west side of town, inhabited chiefly by mechanics and laborers, gets its milk supply from local herds, and very little other milk was sold there. Consequently few cases occurred there.

The Chicago authorities did not prohibit the Wisconsin milk for more than a week after Dr. Parkes acted, and as a consequence when the epidemic was subsiding in Evanston it was increasing in Chicago, until in two days more cases were reported than ever before.

Finally, though the company in question has tried to make us believe that every precaution was taken to prevent infection we are convinced—to put it mildly—that they were mistaken. We have evidence that employés at the out-of-state plant and people on the farms from which the milk came were sick with scarlet fever.

When Dr. Parkes prohibited the receipt of milk from the suspected plant, the company attempted to ship butter and condensed milk in bottles from that station. The Department of Agriculture informs me that bulk condensed milk, while heated to a degree sufficient to kill tubercle bacilli, is not sufficiently heated, probably, to kill other pathogenic germs.

HENRY B. HEMENWAY, M.D.

1243 Chicago Avenue.

Fig Packing in Smyrna.

FESHN, EGYPT, Feb. 14, 1907.

To the Editor:—During a trip to Turkey last fall I learned some interesting and disagreeable facts concerning the fig packing industry, especially at Smyrna. Nothing about the factory was clean, neither the packers, the rooms nor the utensils. The season, of course, is short and the packing employés are enlisted from the street rabble and are said to include many women of questionable character. Those who have visited oriental cities know what the hygiene and physical conditions of the packers must be, coming from the most insanitary homes and belonging to a class where diseases of the most loathsome and infectious types run riot. The figs are packed by hand (the stems being bitten off with the packers' teeth) and are molded with their hands and mouths. During the process of packing the figs are dipped in sea water. This water is taken from the bay at the very shore and is decidedly filthy. Last year the Turkish government prohibited the use of water taken near the shore, but this, like all other orders of the Turk, was simply a device of the officials to extort money from the proprietors for the privilege of taking water from the most convenient place. Between the packers' mouths and hands and the polluted waters of Smyrna Bay one may judge what wonderful possibilities there are of contracting diseases from eating "choice Smyrna figs."

Our government has taken the right course regarding pure-food products in the United States. It certainly would be well to now turn its attention to those of foreign production and importation.

H. B. HANSON.

The Contro-Lateral Sign in Sciatica.—Moutard-Martin and Parturier reported at the last meeting of the Soc. Méd. d Hôp. de Paris that in 5 cases of sciatica they noticed a hitherto undescribed sign of the affection. The patient reclines without a pillow, and the thigh on the sound side is raised and flexed on the pelvis as he lies still. At a certain point the flexion causes a sharp pain in the buttocks on the affected side. The pain is generally at the sciatic point, but not always, and it was noted with both neuralgia and neuritis of the sciatic nerve. They call it the "induced contro-lateral pain," and regard it as an important differentiating sign.

Book Notices

ATLAS AND TEXT-BOOK OF HUMAN ANATOMY. By J. Sobotta, Professor of Anatomy in the University of Würzburg. Edited with additions by J. P. McMurrich, A.M., Ph.D., Professor of Anatomy in the University of Michigan. Vols. I and II. Vol. I, Bones, Ligaments, Joints and Muscles. With 320 Illustrations, mostly in colors. Cloth. Pp. 258. Price, $6.00 net. Vol. II, Viscera, including the Heart. Cloth. Pp. 194. Price, $6.00 net. Philadelphia: W. B. Saunders Company, 1906.

In this book the text and atlas, which were published separately in the original German, are combined. Two volumes of convenient size have already appeared, covering bones, ligaments and muscles in the first, and viscera, including the heart, in the second. The vessels, nerves, etc., remain to be treated in forthcoming parts of the work.

The book is designed for students and practitioners rather than for specialists in anatomy, and is well adapted for its purpose. The illustrations are numerous and well selected. There are many lithographic plates which, in color and outline, reproduce more closely than those in most atlases the actual appearance of dissecting room preparations. There are also a large number of extensive sections of the body in various planes. These are well illustrated and are valuable in showing the relations of viscera and other structures in their natural positions undisturbed by dissection. The representation of the individual bones of the skull each in a color of its own, in which it appears consistently throughout the series of pictures, is a good feature which should be of material help in the study of these structures. The text is simple, clear and concise and has been translated into good English by Dr. W. H. Thomas. A number of brief additions inserted in small type by the editor of the American edition add materially to its interest, and should stimulate the student to further anatomic study. Occasionally the results of recent anatomic investigation are introduced in this way, as for instance an account of the auriculo-ventricular muscle bundle of the heart, Vol. II, page 173.

The nomenclature is based on the B. N. A., the names adopted by the committee of the International Anatomical Association, which met in Basel in 1895. This nomenclature is much the best which has yet appeared. It was published entirely in Latin, and while something may be said in favor of translating the names into English in books for the use of English-speaking students, such changes are always at the expense of conformity with international usage. In this book some attempt has been made to adapt the Latin names to our vernacular. Many of them are translated into English, many are dropped, other names being substituted for them, while some are partly translated and left partly in their Latin forms. Some of these changes make the names more readily intelligible, but some are at the expense of accuracy, e. g., "greater tubercular ridge" for "crista tuberculi majoris," Figure 114. The ridge is not tubercular. "Obturator foramen" is used instead of "foramen obturatum," Vol. I, page 96. It is not logical to speak of a foramen as obturator, even though the term has been extensively used in English books. Changes are sometimes at the expense of clearness, for instance, the use of the name "ulnar lateral carpal ligament," instead of "ligamentum collaterale carpi ulnare," Figure 203.

The terms of direction and position are sometimes different from those of the B. N. A. Thus the latter uses "externus" always to indicate position near the body surface, and "lateralis" always to indicate position relatively distant from the median plane of the body. Lack of uniformity in the application and spelling of anatomic names is to be regretted, because the subject of anatomy is one especially adapted to develop in the student habits of accurate work and of accurate and definite statement of fact. While the changes made are of some advantage in that the names are more intelligible, the disadvantages seem more than sufficient to offset them, and on the whole the retention in texts and atlases of the international nomenclature unaltered would seem preferable. In this country we are in a transition stage in the matter of anatomic nomenclature, as is noted in the editor's preface, and we are still compelled to consider the older forms made familiar by

long usage. The book is a beautiful one with several new and valuable features, and is a distinct addition to the anatomic literature accessible in English.

PRECIS DE DIAGNOSTIC CHIMIQUE, MICROSCOPIQUE ET PARASITOLOGIQUE, par les docteurs Jules Guiart et L. Grimbert. 960 pp. avec 503 figures, cartonné, 15 francs.

Among the numerous recent works in the general field of clinical diagnosis, this deserves prominent mention. Chemical, microscopic and parasitologic methods are coming daily into more general clinical use; yet students and investigators are confronted by the great difficulty that the desired data are scattered through such diverse and often inaccessible publications. This is peculiarly true of the parasitologic side of the question. That these authors, in spite of their incisive and condensed manner of presentation, have taken 960 pages to present a compendium, is at once evidence of the extent of the field and of their own command of it.

The work opens with two chapters on bacteriologic technic, after which are treated *seriatim* in distinct chapters the examination of the blood, pus, pathologic fluids, milk, nasal mucus, sputum, materials from the mouth, pharynx, stomach, intestine, liver, skin, ear, eye and genital organs, the urine and finally chemical reactions and tests. In each chapter the organ and its products, normal and abnormal, are discussed from the standpoint successively of chemistry, microscopy and parasitology, which latter term is taken to include bacteria, fungi and animal parasites. The methods recommended have been selected with a view to eliminate the more difficult or doubtful, and to present primarily such as are useable by the educated physician. Every effort has been exerted to make the compend thoroughly practical and, as the preface states, "even though a large number of physicians still disdain the methods of the laboratory, as incompatible with the exigencies of daily practice, it must be recognized that these methods demand increasing attention from the clinician mindful of his responsibility. . . . To-day the physician who holds to the ancient diagnosis may be compared to the surgeon who still smiles at antisepsis and asepsis."

The tables are numerous and well arranged and the illustrations abundant. In the latter color has often been used to good effect in the differentiation of such appearances as are presented by stained preparations. Some figures of the bacteria are, however, rather crude, and in general this group is the least satisfactorily illustrated.

The usual work on clinical diagnosis handles animal parasites in a very superficial and inadequate fashion. The reverse is true of the work under consideration. The detailed methods for conducting examinations, the structures available for differential diagnosis and the clinical importance of various species are admirably set forth. The illustrations are selected with care from the best authorities, though unfortunately their source is not always given, and the text represents the most recent discoveries in this rapidly expanding field. One can not help regretting the absence of references to the principal sources of information, but in a compendium, already at the maximum by virtue of the field covered, lack of space is probably a satisfactory explanation. American students and investigators will thank the authors for their service in producing so comprehensive and practical a work.

TOXINS AND VENOMS, and Their Antibodies. By Em. Pozzi-Escot. Authorized Translation by A. I. Cohn, Ph.D. First Edition. Cloth. Pp. 101. Price, $1.00 net. New York: John Wiley & Sons, 1906.

This little book is a curiosity in its way. The complex subject of immunity, antigens and antibodies is discussed in a superficial, incomplete, and at times reckless manner. Thus we are told that a typhoid toxin is obtainable from the typhoid bacillus and that "this toxin, injected into guinea-pigs, develops in them typhoid fever." Unintelligible phrases, such as "therapeutic diphtheritic toxin," "pathologic diphtheria," "antitoxic serums with a specific but transient immunity," "the serum of vaccinated rabbits is an antivenom toward erysipelas," etc., occur frequently. The translation may be responsible for some of these peculiarities, because it presents many evidences of having been made by one unfamiliar with the subject. Careful search fails to reveal a single reference to an American author.

Miscellany

Prevention of Yellow Fever in Havana.

Dr. J. R. Kean, U. S. Army, adviser to the sanitary department of Cuba, now under the provisional administration of the United States, sends us the following interesting summary of the system for the prevention of yellow fever in Havana. As now in operation this comprises the following:

1. Methods to prevent the breeding of stegomyia. 2. Methods of disinfection to destroy infected mosquitoes when cases occur. 3. Methods for the detection and reporting of yellow fever.

1. This is recognized as the basic or fundamental procedure and is organized as follows: The city, which has a population of approximately 300,000, is divided into 42 districts, to each of which is assigned a district inspector, who makes house-to-house inspections. He is accompanied by two laborers, who carry cans of oil and a ladder for the purpose of inspecting tanks, gutters, etc. This inspector is in uniform and wears a badge bearing the seal of the sanitary department; he also has a written paper, showing his authority. He inspects his district, following the streets in prescribed order, and each afternoon leaves at the sanitary department a report showing the sanitary condition of each house inspected. The next morning he must begin his inspection at the house next to the one where his inspections of the preceding day terminated. Four special inspectors supervise the work of the district inspectors, two of them being medical officers of the U. S. Army. In addition to seeing that the inspectors fulfill the prescribed hours of work, they reinspect houses in the different districts which have been recently reported on by the district inspectors as being free from breeding places for mosquitoes. If larvæ are found on these premises they are collected and brought to the department as evidence against the district inspector, who, when convicted in this way of negligence, is punished first by stoppage of ten days' pay, and if the offense is repeated, by dismissal.

Mosquito work in Havana is simplified by its excellent water supply and the comparatively small number of cisterns. All cisterns, cesspools and tanks are required by law to be screened, so as to be mosquito-proof; and the enforcement of this sanitary ordinance is one of the special duties of the district inspectors. The fact that mosquitoes are being bred on the premises of any householder is a violation of the ordinances, which after proper warning and explanation, is punished by a fine. This system of house-to-house inspection has been in operation since November, and the people have become educated as to its object, so that there is now little friction produced by it, and it is difficult to find either mosquito larvæ or adult stegomyia in Havana or its suburbs.

One division of the mosquito work is devoted to the draining, or where this is not possible, the petrolization of ponds, pools or other collections of water in open lots, streets and fields, and consists of two petroleum brigades and two brigades for ditching and draining. The petroleum brigades also make systematic collection of tin cans, crocks, bottles and other rubbish which may collect water, and provide breeding places for mosquitoes.

2. The disinfecting brigades, which are three in number, are composed of trained men with overseers of long experience, and follow the technic which was devised by Col. W. C. Gorgas, now chief sanitary officer at Panama, who was chief sanitary officer of Havana in 1901. When a case of fever is reported which is regarded as suspicious, a disinfecting brigade proceeds at once to the house occupied by the patient, who is, if possible, first removed to the hospital for contagious diseases. If he can not be moved, his room is isolated and the rest of the house disinfected, together with all of the other houses in the immediate neighborhood. Sulphur is the fumigating agent habitually used, pyrethrum being used only in special cases where sulphur would by its injury to fabrics, furniture, etc., occasion serious financial loss. In such cases the mosquitoes are carefully collected and destroyed. The disinfecting squad is very thorough in its procedure of closing all cracks and openings. Large openings are closed by a specially made Manila paper or by canvas.

V 4
190

3. Physicians are required to report all suspicious cases, and also all cases of diseases such as dengue and influenza, which may be mistaken for it. Such cases when reported are seen by the board of diagnosis, which is composed of the chief sanitary officer, the director of the Hospital for Contagious Diseases, and three other distinguished physicians of Havana. If the physician prefers to do so, he can have his patient visited by two members of the board instead of the full board.

The great majority of non-immunes in Havana are Spanish immigrants, and these furnish the great majority of the cases of yellow fever. For example, of the 71 reported cases of yellow fever in Havana during the year 1906, all were Spanish except 8. Of the 41 cases reported from the rest of the island outside of the city of Havana in 1906, all were Spanish except one, who was a Cuban child. These Spanish immigrants have a custom which enormously contributes to the detection of cases of yellow fever and other contagious diseases among them. Each Spanish immigrant, on his arrival in Cuba, joins one of the cooperative societies or clubs, which are made up of the natives of the several provinces of Spain. Each one of these clubs supports a quinta or hospital, to which each member has the right to admission for treatment in case of sickness. These quintas are among the largest and best equipped hospitals in Havana. They are required to put all non-immune patients who have fever in screened wards, and to point them out to the medical inspector of the sanitary department, who visits each quinta daily. In this way the cases of yellow fever occurring among the Spanish non-immunes in Havana are in the great majority of cases isolated and recognized with a certainty which would otherwise be totally impossible; and so the failure on the part of physicians to report cases, which, of course, exists in Havana as in other cities, is minimized accordingly. A reliability is thus given to the sanitary reports of the city of Havana, which it would be very difficult for any other city of like size to obtain. There has been no yellow fever in Havana since December 8, except one isolated case, which occurred Dec. 24, 1906.

Peruna a Beverage, not a Medicine.—The test case brought by the New York State Commissioner of Excise to establish the character of peruna as a liquor and subject to all provisions of the law requiring the sale of whisky, brandy, wines, ale, beer, etc., was tried at Syracuse, Dec. 10-15, 1906, before Supreme Court Justice Rogers and a jury. Five of six bottles of peruna purchased by the commissioner were analyzed and the analysts testified that the preparation contained between 26 and 27 per cent. alcohol, and only traces of cubebs and ginger and a small percentage of solids not drugs. The contents of the sixth bottle and a part of one other bottle were given to the defendants for analysis by their chemist, whose analysis showed substantially the same results as obtained by the commissioner's chemists. Justice Rogers, to simplify matters for the jury, gave them the following list of questions:

1. Is the preparation contained in the five bottles of peruna produced by the plaintiff, consisting of water, alcohol and certain drugs, a proper remedy for the cure of Bright's disease?
2. Is the preparation contained in the five bottles of peruna a proper remedy for the treatment and cure of acute catarrh?
3. Is the preparation contained in the five bottles of peruna a proper remedy for the treatment and cure of chronic catarrh?
4. Is the preparation a proper treatment and cure for disease of the mucous membrane?
5. Was the quantity of alcohol, 26 or 27 per cent., contained in the preparation in question necessary to hold the drugs actually put therein in the solution?
6. Was the quantity of drugs contained in one bottle of the alcohol, diluted with water, sufficient in amount in tablespoonful doses, three or four times a day, to produce any appreciable remedial effect?

The jury answered all six of the questions in the negative, deciding, in effect, that peruna is not a remedy for the treatment of any disease, and that it is so much a liquor that the sale should require a liquor tax certificate. The defendants were granted a thirty days' stay of execution and will appeal to the Appellate Court. The *Oil, Paint and Drug Reporter* states that since the case was commenced the Peruna Drug Manufacturing Company has changed the formula of the preparation so that another test case will be necessary to determine whether or not the amended peruna is a liquor or a medicine, and that this decision, therefore, applies only to the preparation which is now manufactured by another company according to the old peruna formula.

The Relation of Alcohol to Tuberculosis.—The criticisms by Wolff, in the *Beitr. z. Klin. d. Tuberkulose*, iv, 3, of the assumption that alcohol causes tuberculosis and should not be used in the treatment of this disease, have called forth a rejoinder in the *Prag. med. Wochschr.*, 1906, No. 12, by Holitscher. While it is difficult to draw a correct conclusion as to the etiologic rôle of alcohol in tuberculosis from general vital statistics, on account of the numerous factors to be taken into consideration, the statistics of certain trades, such as brewers, distillers, waiters, etc., indicate that alcohol plays a certain direct part in the causatio of consumption. Experiments also have shown that tuberculous animals die sooner when fed on alcohol. The large proportion of alcoholics found among phthisical patients, varying from 40 per cent. (Liebe) to 88 per cent. (Barbier, Rendu and Constan), is further evidence. The small number reported from certain clinics is probably due to the elastic use of the term "abuse of alcohol" by some observers. The value of these statistics, however, is impaired by the fact that the proportion of alcoholics to the entire population is not known. The indirect action of alcohol in producing poverty and other unfavorable influences should not be neglected, and its influence on posterity especially should be emphasized more than Wolff has done. In regard to the use of alcohol in sanatoriums for tuberculosis, Holitscher contends that its use at the table should be condemned and that whatever is given should be administered in definite doses as a medicine. He takes the view that although alcohol has been shown to be oxidizable in the organism, it ought not therefore to be regarded as a food any more than morphin. The use of alcoholic drinks in consumptive sanatoriums is unnecessary, and should be avoided, as the valuable hygienic lesson of the injurious effects of these drinks can be taught effectively by the example of these institutions. "To-day the indispensability of a 'moderate' use of alcohol is proclaimed by many. But it is not to be doubted that even this teaching, no longer in accord with the progress of science, will find its place among the obsolete; and the sanatorium barring alcohol will hold the field as the only justifiable and truly exemplary and hygienic one."

Restoration of Vision by Transplantation of Cornea.—Zirm gives an illustrated description in the *Wien. klin. Wochenschr.*, 1907, page 61, of what he styles the first successful graft of cornea in the human eye. He ascribes his success to the fact that he used the vigorous cornea from the eye of a lad of 11, just removed on account of injury from an iron splinter, and that he performed the operation during deep anesthesia, without antiseptics, with the von Hippel trephine. The flap was kept between two pieces of gauze moistened with physiologic salt solution and was engrafted by manipulating the gauze to bring it into place without touching it with an instrument. The graft was held in place by two crossed threads passed through the conjunctiva of the eyeball. His patient had been blinded by a caustic in both eyes, and the graft has restored vision in the left eye so that his earning capacity is restored. The condition of the graft has remained satisfactory during the 13 months since the operation, but in the other eye it caused disturbances compelling its removal. The case was mentioned by our Vienna correspondent on page 812.

Injection of Fresh, Normal Serum to Arrest Hemorrhage.—P. E. Weil announces that he has found intravenous injection of 15 cc. of fresh blood serum, or twice this amount injected subcutaneously, by far the most effectual means to arrest hemorrhage. In hemophilia, in purpura, in pernicious anemia accompanying purpura, in short, in all cases of a constitutional tendency to hemorrhage the effects realized were sometimes amazing, as he relates in detail in an article published in the *Tribune Médicale* for Jan. 12, 1907. The serum from man, rabbit, horse or beef serum all proved effectual, but a few by-effects were observed with the latter, and he advises the use of human or rabbit serum, freshly drawn. The above dosage is for adults; half the amounts are sufficient for children. He explains the action of the serum as stimulating the production of the coagulating ferment or rendering more active the amount already present.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, CONTRACT PRACTICE, INSURANCE FEES, MEDICAL LEGISLATION, ETC.

PROPOSED OSTEOPATHIC BILLS.

Persistent, Concerted Action by Osteopaths for Favorable Legislation in Many States.

A summary of the present status of osteopathic legislation will not be without interest and profit. Up to Jan. 1, 1907, twenty-nine states had adopted some provisions for the licensing of osteopaths. Of these, eleven have adopted amendments to the medical practice act, authorizing the existing state board to examine and license osteopaths. Three states have added an osteopath to the state board; in eleven states special osteopathic examining boards have been established; in three states osteopaths are exempt from the operation of medical practice laws; while in one state they are allowed to pursue their calling after registration in the office of the county clerk.

There are, then, twenty states in which no osteopathic legislation has as yet been secured. In seventeen of these states the legislature is now in session; in twelve of these osteopathic bills were promptly introduced. In addition, bills were introduced in seven states with a view to modifying existing osteopathic legislation. From these facts, it might be claimed by the applicants for special legislation for osteopaths, that the simultaneous appearance of nineteen bills in one month is conclusive evidence of the universal and overwhelming demand on the part of the public for osteopathic legislation. When, however, we examine the facts, this apparent demand, as far as the public is concerned, disappears. On comparing the bills the surprising discovery is made that, although supposed to originate independently in state legislatures, separated in some cases by thousands of miles, these bills all bear the evidence of being the work of one hand. For example, House Bill No. 31, introduced Jan. 14, 1907, in the legislature of the state of West Virginia, contains the following provisions:

Section 1 provides for the appointment of a state board of osteopathic examination and registration of five members.

Section 2 provides that any person, before engaging in the practice of osteopathy, shall make application for a certificate, stating name, age and residence, evidence of preliminary education, date of diploma of graduation from an osteopathic school, and name of the school of osteopathy from which the applicant graduated. This section also provides that the board may, at its discretion, accept, as the equivalent of any part or all of the second, third and fourth requirements (that is, of all educational requirements) evidence of five or more years' practice of osteopathy. The section further provides that the board may, at its discretion, dispense entirely with an examination in the case of an osteopath licensed to practice osteopathy in any other state or territory, whose requirements are of equal grade, or of any osteopath who has been in the actual practice of osteopathy for five years.

Section 3, lest some one might be omitted and fail to come under the generous provisions of the preceding section, provides that any person over 21 may make application for a certificate and on examination may be licensed.

Section 4 provides for fees.

Section 5 specifies that osteopaths shall be subject to all state and municipal regulations regarding contagious and infectious diseases.

Section 6 provides for recording certificates in the county clerk's office.

Section 7 provides penalties for the violation of the act.

Section 8 specifically provides that osteopathy is not the practice of medicine, although section 5 specifies that osteopaths shall observe and be subject to all state and municipal regulations the same as "physicians of other schools of medicine."

Section 9 provides for reports on the part of the officers of this board.

In the Oregon legislature Mr. Wilson introduced House bill No. 236, Jan. 23, 1907, entitled, "An act to regulate the practice of the system, method or science of treating diseases, known as osteopathy, and creating a board of examination and registration of the same and providing for the violation of this act." In this bill the definition of osteopathy, which is found in section 8 of the West Virginia bill, is switched to section 1, and is considerably shortened, but the phraseology is identical. Section 2 of the Oregon bill is, with the exception of some slight changes, identical in verbiage with section 1 of the West Virginia bill. In like manner the succeeding sections of the bill coincide almost absolutely. The Oregon bill gives the board authority to accept five years' experience in place of all educational requirements, and also makes it mandatory on the board to grant a license to any licensee of any other state. The absolutely identical wording proves clearly that the Oregon and West Virginia bills both emanated from the same source. Senate bill 5221, introduced by Senator Foraker of Ohio in the United States Senate, evidently emanated from the same source, although it was rewritten and differed somewhat in verbiage. It provided for an osteopathic licensing board for the District of Columbia and contained the general reciprocity clause found in the other bills. It also contained the following paragraph under section 8:

> And said board of osteopathic examiners is further authorized and directed to issue in favor of its licentiates such certificates, if any, as may be necessary to enable such licentiates, without examination, to obtain license to practice osteopathy in other jurisdictions.

It is evident that the object of the osteopaths in endeavoring to get a bill through Congress was to have Congress recognize osteopathy as well as to make certificates issued by the District of Columbia good all over the country. This bill was killed in committee by a vote of two to one.

Assembly bill No. 61, introduced into the California legislature by Mr. Lemon; Senate bill No. 21, introduced in Illinois by Mr. Chafee; House bill No. 66, introduced in Illinois by Mr. Allen; House bill No. 790, Massachusetts; House bill No. 690, Pennsylvania; Senate bill No. 28, Utah, all possess the same general characteristics. A number of the bills contain some special features which are interesting. For instance, the Illinois bill provides that "any person within thirty days after the organization of the board, holding a certificate to treat human ailments without the use of medicine and presenting such certificate, shall be licensed by the board, provided he files a certificate of the Illinois Osteopathic Association, setting forth that he is a graduate of a reputable school of osteopathy, etc."

However, all the bills provide for a separate board of osteopathic examiners and for an examination before licensing, but with so many exemptions as practically to nullify the examining features. Each one of them, except the District of Columbia bill, contains a specific definition of osteopathy and specifies that it is not, in any sense, the practice of medicine and each provides for unlimited license without examination of any person already licensed in any other state "having an equal standing." As this clause appears in all of these bills this provision practically means that, having been licensed in one state, there is no limit to the extension of the right of the individual to practice osteopathy.

It is evident that this simultaneous flood of practically identical osteopathic bills is the result of a well-planned effort to secure, in each state, legislation which will give the individual osteopath all the privileges of a member of the medical profession, while expressly stating that he is not practicing medicine. In addition, these bills provide for unlimited and practically universal reciprocity, and also permit the board to substitute a variety of other qualifications for the educational requirements, thus allowing the licensing of practically any one whom the board may wish to license.

Society Secretaries to Confer.

Dr. John B. Donaldson, the secretary of the Washington County (Pa.) Medical Society, having been requested to arrange for a meeting of secretaries of county societies at the Reading meeting of the state society, September 23-26, has issued a circular letter to the county secretaries urging them to be present and to utilize the features of the meeting. The idea of such a meeting of county secretaries is excellent and should be made a regular feature of every state society meeting. As Dr. Donaldson well says, "a great deal depends on the secretary." The results of this innovation will be carefully watched and, we hope, imitated by other state societies.

V 4
190

Medical Education and State Boards of Registration

COMING EXAMINATIONS.

IOWA Board of Medical Examiners, Des Moines, March 19-21. Secretary, Dr. Louis A. Thomas, Des Moines.

OKLAHOMA Board of Medical Examiners, Guthrie, March 26-27. Secretary, Dr. J. W. Baker, Enid.

UTAH State Board of Medical Examiners, Salt Lake City, April 1. Secretary, Dr. R. W. Fisher, Salt Lake City.

ARIZONA Board of Medical Examiners, Phoenix, April 1-2. Secretary, Dr. Ancil Martin, Phoenix.

COLORADO State Board of Medical Examiners, Denver, April 2. Secretary, Dr. S. D. Van Meter, 1723 Tremont St., Denver.

IDAHO State Board of Medical Examiners, Boise, April 2. Secretary, Dr. J. L. Conant, Jr., Genesee.

MINNESOTA State Board of Medical Examiners, the Old Capitol, St. Paul, April 2. Secretary, Dr. W. S. Fullerton, St. Paul.

MONTANA State Board of Medical Examiners, the Capitol, Helena, April 2. Secretary, Dr. W. C. Riddell, Helena.

WEST VIRGINIA State Board of Health, Wheeling, April 2. Secretary, Dr. H. A. Barbee, Point Pleasant.

GEORGIA ECLECTIC Board of Medical Examiners, Senate Chamber, State Capitol, Atlanta, first week in April. Secretary, Dr. L. F. Bugg, Madison.

GEORGIA Regular Board of Medical Examiners, Capitol Building, Atlanta, first week in April. Secretary, Dr. E. R. Anthony, Griffin.

KENTUCKY State Board of Health, City Hall, Louisville, April 2-3. Secretary, Dr. J. N. McCormack, Bowling Green.

NORTH DAKOTA State Board of Medical Examiners, Grand Forks, April 2-4. Secretary, Dr. H. M. Wheeler, Grand Forks.

RHODE ISLAND State Board of Health, State House, Providence, April 4. Secretary, Dr. Gardner T. Swarts, Providence.

ARKANSAS State Medical Board, Little Rock, April 9. Secretary, Dr. F. T. Murphy, Brinkley.

ARKANSAS Homeopathic Medical Board, Little Rock, April 9. Secretary, Dr. V. H. Hallman, Hot Springs.

DISTRICT OF COLUMBIA Board of Supervisors in Medicine, Washington, April 12 Secretary, Dr. Geo. C. Ober, Washington.

CALIFORNIA State Board of Medical Examiners, San Francisco, April 16. Secretary, Dr. Chas. L. Tisdale, San Francisco, Cal.

MISSOURI State Board of Health, St. Louis and Kansas City, April 16-18. Secretary, Dr. J. A. B. Adcock, Warrensburg.

ILLINOIS State Board of Health, Great Northern Hotel, Chicago, April 17-19. Secretary, Dr. J. A. Egan, Springfield.

TEXAS State Board of Medical Examiners, Austin, April 30-May 2. Secretary, Dr. T. T. Jackson, San Antonio.

TEXAS Eclectic Medical Board, Dallas, about April 25. Secretary, Dr. L. S. Downs, Galveston.

Amended Law in West Virginia.—Dr. S. L. Jepson, member of the West Virginia State Committee on Medical Education, writes that an amendment to the Medical Practice Act has been secured which provides that hereafter, to obtain a license to practice medicine in West Virginia, the candidate must be a graduate of a "reputable medical college recognized as such by the State Board of Health." Another amendment makes provision for reciprocity.

Increased Entrance Requirements.—The faculties of the following colleges have voted to require a preliminary year in physics, chemistry, biology and languages to apply to all students beginning medical study after Jan. 1, 1910:

Illinois Medical College, Chicago.
College of Medicine and Surgery, Chicago.
Kansas Medical College, Topeka.
Oakland College of Medicine and Surgery, California.
American College of Medicine and Surgery, Chicago (effective, 1908).

Graduation Required in Hawaii.—Dr. George Herbert, chairman of the Board of Medical Examiners, and Dr. F. Howard Humphris, secretary of the Hawaiian Territorial Medical Society, state that in order to practice medicine in Hawaii the candidate must have graduated from a medical college having not less than four years of study.

Higher Entrance Requirements in Minnesota.—By a recent ruling of the Minnesota State Board of Medical Examiners, "beginning June, 1911, all applicants for license to practice medicine in that state, graduating in that or a subsequent year, must have satisfied all the entrance requirements, and completed the first two years' work of the College of Science, Literature and the Arts of the University of Minnesota, or present credits for a course elsewhere which is ruled by the said college . . . as equivalent thereto; provided, that a medical student may be matriculated with a condition in not more than one full-year subject or two half-year subjects." All conditions must be removed before beginning the second course in medicine. This ruling, therefore, applies to all students *matriculating* for the session of 1907-8 or thereafter.

Another ruling restores the one-year residence clause to the conditions for reciprocity.

Marriages

J. A. PACKER, M.D., Selma, La., to Miss Mattie Adams of Lovelady, Texas, March 3.

L. P. SPRAGUE, M.D., Rutland, Vt., to Miss Maude Thurber of Brainardsville, N. Y., recently.

CARL P. STRUVE, M.D., South Elgin, Ill., to Miss Jessie Margaret Burns of Chicago, February 24.

ISAAC EUGENE NERVIG, M.D., to Miss Edna Shadle, both of Sioux City, Iowa, at Harvey, Ill., March 2.

FRED B. TAPLEY, M.D., Sacramento, to Miss Alice Stewart of Amador County, Cal., at Vallejo, Cal., recently.

BENNETT GROVE WILLIS, M.D., Hartington, Neb., to Miss Maud Elizabeth Ray, at Omaha, Neb., February 6.

JOHN HENRY WADE, M.D., Ashland, Ky., to Mrs. Edith Stephens of near Point Pleasant, W. Va., February 26.

RAYMOND FRANKLIN METCALFE, M.D., captain and assistant surgeon, U. S. Army, to Mrs. Gertrude Marshall Beverly of Columbus, Ohio, in New York City, February 27.

Deaths

Benjamin Franklin Price, M.D. Cincinnati College of Medicine and Surgery, 1873; a member of the American Medical Association; a veteran of the Civil War; for 25 years a resident of Braddock, Pa.; one of the organizers of the Braddock Medical Association, and a founder of the Braddock Hospital; for six years the president of the local board of health, and for one term a councilor; died at his home in Portland, Ohio, February 22, from tuberculosis, after an illness of more than a year, aged 61.

Albon Z. Howard, M.D. Keokuk Medical College, College of Physicians and Surgeons, Keokuk, Iowa, 1879; a member of the American Medical Association, Oshkosh Medical Club, and Brainerd District Medical Society; a well-known specialist on diseases of the stomach and nervous system, of Oshkosh, Wis., died at his home in that city, February 24, from diabetes, after an illness of one year, aged 54. At the funeral members of the Oshkosh Medical Club acted as pall-bearers.

George Bingham Fowler, M.D. College of Physicians and Surgeons in the City of New York, 1871; a member of the state and county medical societies; health commissioner of New York City under the administration of Mayor Strong; founder of the *Dietetic Gazette*, and for six years associate editor of the *American Journal of Obstetrics*, died at his home in New York City, from hemorrhage of the stomach, March 6, aged 59.

George C. Lewis, M.D. Medical College of Ohio, Medical Department of University of Cincinnati, 1875; a member of the state and county medical societies; for eight years coroner of Jefferson County, Ind., died suddenly from heart disease, at his home in Madison, February 27, aged 51. At a special meeting of the Jefferson County Medical Society appropriate resolutions regarding the death of Dr. Lewis were adopted.

David G. Linvill, M.D. Western Reserve University Medical College, Cleveland, Ohio, 1849; a member of the state and county medical societies; said to have been the oldest practitioner of Northern Indiana and a pioneer of Whitley County, where he had lived for more than 60 years, died at his home in Columbia City, from senile debility, after an illness of two weeks, February 18, aged 86.

Eugene Marguerat, M.D. New York University Medical College, 1859; a member of the state medical society, and in 1868 president of the Cook County Medical Society; a surgeon in the Army throughout the Civil War, and one of the best known practitioners of Chicago, died at his home, March 7, from cerebral hemorrhage, after an illness of one week, aged 78.

Lewis Frederick Suesserott, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1879; a member of the state and county medical societies; from 1886 to 1902 coroner of Franklin County, Pa., and for six years physician to the jail, died at his home in Chambersburg, Pa., March 2, from pleuro-pneumonia, after an illness of four days, aged 50.

William R. Blakeslee, M.D. New York University, New York City, 1875; a veteran of the Civil War; formerly a practitioner of Virginia, and a member of the medical society of that state and of Pennsylvania; who recently returned from a trip to British Guiana, where he had gone in search of health, died February 26, at his office in Lestershire, N. Y., aged 61.

Clifton Scott, M.D. Kentucky School of Medicine, Louisville, 1883; a member of the American Medical Association; for-

merly professor of science in Highland Park College, Des Moines, Iowa, died at Mercy Hospital, Des Moines, February 27, from pneumonia following an attack of cerebral hemorrhage, after an illness of one week, aged 54.

Elisha E. Mullinix, M.D. University of Maryland School of Medicine, Baltimore, 1874; a member of the American Medical Association; a member of the staff of the Frederick City Hospital, and one of the most esteemed practitioners of Frederick County, Md., died at his home in Urbana, March 5, from pneumonia, after an illness of one week, aged 56.

Ryan G. Mendenhall, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1867; New York University Medical College, New York City, 1872; for two terms a member of the state legislature from Linn County, Kan., and at the time of his death mayor of La Cygne, died at his home, February 27, from heart disease.

William Henry Johnston, M.D. Bellevue Hospital Medical College, New York City, 1871; a member of the state medical society and once president of the Lewis County Medical Society; a veteran of the Civil War, died at his home in Port Leyden, N. Y., March 1, after an illness of more than a year, aged 66.

Columbus Hixson, M.D. Miami Medical College, Cincinnati, 1866; for more than 30 years a practitioner of Kansas City, and one of the founders of Kansas City Medical College, died at the General Hospital, Kansas City, March 6, five days after injuries received by being run down by a hack, aged 80.

Thomas Crawford McNeill, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1860; a surgeon in General Forrest's cavalry during the Civil War, died at his home in Paris, Tenn., February 9, from paralysis, after an illness of more than four years, aged 77.

Austin F. Denlinger, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1883; a member of the medical pension examining board of Carbon County, Pa., died at his home in Lansford, March 1, from hemorrhages, after an illness of two days, aged 50.

Jacob Kulp Cassel, M.D. Pennsylvania Medical College, Gettysburg, 1871; assistant surgeon of the Fifty-seventh Pennsylvania Volunteer Infantry during the Civil War, died at his home in Philadelphia, March 2, after a short illness, aged 72.

William S. D. Johnson, M.D. Medical Department of the University of Missouri, St. Louis, 1850; for many years a practitioner of La Belle, Mo., died at the home of his son in Versailles, Ill., February 22, after an illness of five days, aged 83.

William Aaron Butman, M.D. Baltimore Medical College, 1898; secretary of the Boston Medical Society from 1902 to 1905, died at his home in Somerville, Mass., February 11, from tuberculosis, after an illness of several years, aged 37.

George A. Hayunga, M.D. New York University, New York City, 1863; a surgeon in the United States Navy from 1861 to 1866, and thereafter a practitioner of New York City, died at the home of his nephew in New York City, March 6, aged 67.

Conrad Karges, M.D. Washington University, Medical Department, St. Louis, 1883; for many years mortuary clerk in the St. Louis health department, died suddenly at his home in St. Louis, February 24, from heart disease, aged 58.

William Henry May, M.D. College of Medicine, Syracuse (N. Y.) University, 1890; a member of the state and county medical societies; bacteriologist of Syracuse, N. Y., died in a hospital in that city, March 2, after an operation, aged 42.

Horace Still, M.D. Hahnemann Medical College and Hospital, Philadelphia, 1877; for several years a member of the local school board, died at his home in Norristown, March 1, from influenza, after an illness of one week, aged 51.

Hance C. Chesney, M.D. Medical College of Fort Wayne, Ind., 1883; for several years justice of the peace at Custer City, Pa., died at his home in that place, March 1, from uremia, after an illness of two days, aged 44.

Otto F. Voigt, M.D. American Medical College, St. Louis, 1886; died at his home in Bailey's Harbor, Wis., February 23, from heart disease, seven weeks after a fall in which he sustained severe injuries, aged 62.

D. G. Shirley, M.D. University of Tennessee, Medical Department, Nashville, 1888; a member of the state and county medical societies; a practitioner of Tyler, Texas, died in West Dallas, February 25, aged 47.

James L. Carr, M.D. Cincinnati College of Medicine and Surgery, 1877; a member of the state and county medical societies, of Monon, Ind., died suddenly from heart disease at that place, February 22.

Oscar A. Armstrong, M.D. Medical Department of Fort Worth (Texas) University, 1899; died at his home in Neola, Texas, February 1, from pneumonia, after an illness of eleven days, aged 32.

George Lee Fife, M.D. Western Pennsylvania Medical College, Pittsburg, 1890; died at his home at Blair Station, Pa., from pneumonia, February 26, after an illness of four days, aged 39.

Frederick G. Merrill, M.D. Bellevue Hospital Medical College, New York City, 1879; of New York City, died from uremia, at the home of his brother in Skowhegan, Me., February 25, aged 51.

Frank W. Homer, M.D. Hahnemann Medical College and Hospital, Chicago, 1897; of Spokane, Wash., died at his farm on White Bluff Prairie, from nephritis, February 23, aged 38.

James C. Flynt, M.D. University of Louisville (Ky.) Medical Department, 1878; died at his home in Gurley, Ala., from influenza, after a long illness, February 25, aged 71.

Mortimer F. Sweeting, M.D. New York Homeopathic Medical College and Hospital, 1850; died suddenly from pneumonia, at his home in South Butler, N. Y., aged 80.

Hamilton J. Coffroth, M.D. University of Maryland School of Medicine, Baltimore, 1879; of Greensboro, Md., died at the University Hospital, Baltimore, March 7, aged 50.

Joseph D. Livezey, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1871; died at his home in Philadelphia, February 25, aged 65.

Albert W. La Wall, M.D. University of Buffalo, Medical Department, 1897; died at his home in Scio, N. Y., February 22, from heart disease, aged 33.

Charles Reed, M.D. College of Physicians and Surgeons in the City of New York, 1879; died at his home in Brooklyn, March 5, from pneumonia, aged 51.

William Clay McGee, M.D. Baltimore Medical College, 1894; died at his home in Canton, Ohio, February 1, after an illness of four weeks, aged 39.

James L. Williams, M.D. Miami Medical College, Cincinnati, 1876; died at his home in Indianapolis, February 27, after a long illness, aged 67.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

KENTUCKY PRESIDENTS OF THE AMERICAN MEDICAL ASSOCIATION.

SPRINGFIELD, ILL., Feb. 27, 1907.

To the Editor:—Some years ago I saw the statement that a larger percentage of ex-presidents of the Association were either natives of Kentucky, graduates of Kentucky schools or connected with Kentucky schools than from any other state. Can you give me any information on this subject? H. J.

ANSWER.—Ten ex-presidents of the American Medical Association are or have been associated with Kentucky.

At the twelfth annual meeting, held in Louisville, Ky., in 1859, Dr. Henry Miller of that city was elected president. Dr. Miller was born in Glasgow, Ky., Nov. 1, 1800, and died in Louisville, Feb. 8, 1874. He was professor of obstetrics in the University of Louisville.

At the nineteenth annual meeting held in Washington, D. C., in 1868, Dr. William O. Baldwin, of Montgomery, Ala., was elected President. Dr. Baldwin was born in Montgomery, Aug. 9, 1818, and died in the same city, May 30, 1886. He was graduated in medicine from Transylvania University, Kentucky, in 1837.

At the twenty-second annual meeting held in San Francisco, 1871, Dr. David W. Yandell, of Louisville, was elected president. Dr. Yandell was born in Murfreesboro, Tenn., April 4, 1826. He was professor of surgery in the University of Louisville, and died in Louisville, May 3, 1898.

At the twenty-eighth annual meeting, held in Chicago, 1877, Dr. Tobias G. Richardson, of New Orleans, was elected president. Dr. Richardson was born in Lexington, Ky., and was graduated from the University of Louisville in 1848. He died in New Orleans, May 26, 1892.

At the thirtieth annual meeting held in Atlanta, Ga., in 1879, Dr. Lewis A. Sayre, of New York City, was elected president. Dr. Sayre was born in New Jersey in 1820, and was graduated from the Transylvania University, Ky, with the degree of A.B., in 1839. His medical education was obtained at the College of Physicians and Surgeons in New York.

At the thirty-first annual meeting held in New York City, in

1880, Dr. John T. Hodgen of St. Louis, was elected president. Dr. Hodgen was born in Hodgenville, Ky., Jan. 17, 1826, and died in St. Louis, April 28, 1882.

At the thirty-seventh annual meeting held in St. Louis, in 1886, Dr. Elisha H. Gregory was elected president. Dr. Gregory was born near Russellville, Ky., Sept. 10, 1824, and was graduated from the St. Louis University in 1840.

At the forty-first annual meeting, held in Nashville, Tenn., in 1890, Dr. William T. Briggs of Nashville was elected president. Dr. Briggs was born in Bowling Green, Ky., Dec. 4, 1829, and died at Nashville, June 13, 1894.

At the forty-ninth annual session, held in Denver, 1898, Dr. Joseph McDowell Mathews, of Louisville, was elected president. Dr. Mathews was born in Newcastle, Ky., in 1847, and was graduated from the University of Louisville in 1867.

At the fifty-fifth annual session, held at Atlantic City, Dr. Lewis S. McMurtry, of Louisville, Ky., was elected president. Dr. McMurtry was born in Central City, Ky., and was graduated from Tulane University in 1873.

COMPOSITION OF "KARGON."

ST. LOUIS, March 4, 1907.

To the Editor:—Can you give me any information regarding the composition of "Kargon," one of the ingredients of a prescription advertised in the daily press as a "simple home mixture which any druggist can put up?" M. J.

ANSWER.—From the reports of our chemists who analysed this nostrum it appears to contain potassium acetate and buchu as the essential constituents. One chemist concludes his report as follows: "This wonderful remedy, then, seems to be acetate of potash, about 15 grains to each teaspoonful, and fluid extract of buchu." Another chemist states: "Kargon contains buchu, potassium acetate, glycerol and 18 per cent. alcohol."

The nostrum is put up by the Kargon Extracting Company of Cincinnati, the title "extracting" evidently referring to the process to which the gullible public's purse is subjected. The mixture is advertised as "being composed of common everyday vegetable (?) ingredients" as being better than "patent medicines" which are largely "alcoholic concoctions." The method of advertising is as ingenious as it is misleading. Appearing, in many cases, as solid reading matter, it discourses on the importance of the free action of the kidneys as an essential to health. A harmless-looking prescription is then given, consisting of Fluid Extract of Dandelion, Compound Kargon and Compound Syrup of Sarsaparilla, which can "be procured from any good pharmacist and mixed at home." The "Compound Kargon" is always carefully sandwiched between the two pharmacopeial preparations with but one evident object in view, that of leading the public to suppose that Kargon is but one of the numerous standard diuretics. Of course a combination of acetate of potash and fluid extract of buchu with fluid extract of dandelion and compound syrup of sarsaparilla makes an active diuretic. But it is a combination that in the majority of cases of kidney disease will do great harm. And no matter what the conditions, if used indiscriminately and "taken regularly," as the advertisements advocate, it can not be otherwise than dangerous.

THE SPRAGUE MERCANTILE AGENCY.

CALDWELL, IDAHO, Feb. 16, 1907.

To the Editor:—Last summer a representative of the Sprague Mercantile Agency of Chicago, Ill., called on me and exhibited some very doubtful accounts which they claimed to have been successful in collecting. I gave them about $1,000 worth of accounts to collect for me with the following result: They induced one debtor to pay me $60; I had previously had to pay a membership fee of $50 and also $1.50 interest on the note for fee for ninety days; in addition there was $9 to pay as 15 per cent. on the $60 collected. I was thus "out" fifty cents for collecting the $60. They then collected from another debtor $41, which they failed to account for. They wanted me to give them unlimited power to collect and have me pay after collections were made; this I refused to do. They already have $101, or 10 per cent. of the face value of the accounts, and I have nothing. J. J. HAMILTON, M.D.

[This seems to be in line with the experience of some of the correspondents of the *Medical World;* this journal, which has exposed other concerns, published some letters from physicians who complained bitterly of the methods pursued by the Sprague agency. These letters expressed the opinion that the membership fee which was exacted, constituted the most important thing—to the agency, and the correspondents seemed to be unanimous in characterizing the company in terms that were anything but complimentary.—ED.]

THE BABINSKI REFLEX.

———, IND., March 5, 1907.

To the Editor:—Please explain the so-called Babinski reflex. How is it elicited and what does it indicate? B.

ANSWER.—This reflex, first described by Babinski in 1896, consists in deliberate extension of the toes, and especially of the great toe, followed by dorsi-flexion of the ankle joint when the sole of the foot is gently or firmly stroked. This sign is generally associated with disease of the anterior columns of the spinal cord—the pyramidal tracts. It is always pathologic except in very young children, not yet able to walk, in whom a similar but more rapid response is obtainable. Walton and Paul, however, after an extensive investigation reported (*Jour. Nerv. and Ment. Dis.*, June, 1900), that in early infancy no constant or characteristic movement of the toes occurs, though extension is rather more common than flexion. They also state that the Babinski sign occurs in about 70 per cent. of all cases of paraplegia and in about the same proportion of cases of disease of the pyramidal tracts. In the latter condition it is often the first symptom to appear.

VACCINE FROM MICROCOCCUS NEOFORMANS.

———, FEB. 21, 1907.

To the Editor:—Please give in your Queries and Minor Notes the method employed in preparing the vaccine from cultures of *Micrococcus neoformans* for the treatment of cancer. X. Y. Z.

ANSWER.—According to Doyen, the *Micrococcus neoformans* was discovered by him in 1885, and was frequently observed by him in tumors both benign and malignant until in 1900 he succeeded in cultivating it. He claims that it has been found in tumors in all parts of the world by observers who have followed his technic, which he described in a communication to the Paris Academy in 1901. He prepares his vaccine as follows:

A bouillon from the breast of a cow in lactation is inoculated with a piece of a malignant tumor or with cancer juice. The bouillon should be peptonized and contain 1 per cent. of glucose, although the latter is not essential. From two to two and one-half years are necessary to obtain the toxin. The cultures must be renewed once in two months, and it is necessary to precede each new inoculation of the bouillon by a passage of the micro-organism through a susceptible animal, preferably the white mouse. Great care must be used in the cultivation, as the slightest variation in the temperature of the oven or in the composition of the bouillon may cause poor development or death of the micro-organism. Two forms of toxin are prepared: 1, a pure form obtained after 12 to 18 months of culture, and, 2, an attenuated form which is produced by treating the culture with 7 per cent. of quinin hydrochlorid, 2 per cent. of cacodylic acid and 2 per cent. of methylarsenic acid, which must be added under strict aseptic precautions. Two kinds of vaccine must be prepared. It is dangerous to employ for these vaccines young cultures; they must be at least 2½ years old. The weaker vaccine is prepared by heating the cultures for two days to a temperature of 45 C. (113 F.), and the stronger by heating the same cultures to a temperature of 40 C. (104 F.) for the same time.

Criticism of Doyen's claims has been made by French surgeons and a commission appointed by the French Congress of Surgery in 1904 reported in 1905 somewhat unfavorably as to his clinical results. His more recent work is summarized in his address to the French Congress of Surgery, Oct. 1 to 6, 1906, and in a report by Cornil to the *Berliner klinische Wochenschrift* (Feb. 4, 1907). Doyen refers to the work of Ehrlich, who has demonstrated the transformation of epithelioma into sarcoma after several passages through white mice. Immunization was obtained which seemed to be equally effective against both sarcoma and epithelioma. Doyen believes he has been able by means of the micro-organism of neoplasms (*Micrococcus neoformans*) to produce in the white rat several varieties of epithelioma and of enchondroma and in the white mouse a melanotic sarcoma. He thinks that it is necessary at present to admit the etiologic identity of sarcoma and carcinoma. The treatment of cancer by vaccines prepared from attenuated cultures of the *Micrococcus neoformans* has been undertaken by several experimenters, including Wright, and the results have been very uniform and demonstrate that it is possible from a pure culture of *M. neoformans* to prepare a vaccine which produces favorable changes in case of cancer that have not been obtained by any other method. It is possible to determine the true value of the treatment by Wright's opsonic method and to regulate the therapeutic use of the vaccine for each patient. Doyen reported 64 cases (*Semaine médicale*, 1905, p. 490), and has recent reports of 56 more in which the results have been very satisfactory. Of the 19 patients who were living, June 30, 1905, 3 have since succumbed, in two the cancer having invaded the pleura before the beginning of the treatment, of the 16 surviving cases only two are in a serious condition. Doyen relates some remarkable cases and expresses the opinion that it is possible to arrest the progress of cancer in certain cases and that injection alone may cure cases in which surgery is impotent.

In the discussion Cazin took exception to the assumption of Doyen that sarcoma and carcinoma, except in mixed tumors, showed any signs of a mutual transformation.

Cornil gives a critical estimate of Doyen's work, which he divides into that relating to his serum treatment, and that with the causa-

tion of cancer. In regard to the former he cautions us that too early conclusions should not be drawn. Doyen operates before instituting the serum treatment when operation is possible. By injections of cultures of the micrococcus, Doyen claims that he has been able to obtain tumors in white rats and mice, but never in dogs or other animals. Although the tumors produced by the injection showed the histologic character of malignant growths, they failed to follow the clinical course of such tumors in their spread to the lymph glands and other organs. It may be that the animals experimented on died too soon for such results to follow. It can not be said, therefore, that Doyen has produced cancer, but only cancer-like tumors.

Jacobs and Geets (*Lancet*, 1906, i, 964-966) state: "The researches which we have made in connection with cancer have convinced us: (1) that we have in cancerous cachexia a specific microorganism, the *Micrococcus neoformans* of Doyen; (2) that the anticancerous sera of Doyen with which we have experimented are wholly useless; and (3) that it is practicable to immunize the human organism by means of a series of inoculations of the *Micrococcus neoformans* vaccine provided that these are properly controlled by examinations of the opsonic power of the blood." They propose the employment of a vaccine made from cultures of the same age (as those used by Doyen?) sterilized at 60 degrees C., washed freely, and standardized by the enumeration of the bacilli as advocated by Wright.

Those interested in this subject are referred to the following bibliography:

Doyen: Le Micrococcus Neoformans et les Neoplasmes, Par., 1903, Sleicher frères et Cie.

Doyen: Presse Médicale, 1904, ii, 671.

Calmette: Berlin. klin.-therap. Wochsch., 1905, 13; also Wien. klin-therap. Wochsch., 1905, 13.

Alvarado de Mattos: Estudo do microbio de Doyen Movimento med., Coimbre, 1904-5, iv, 365-369.

Doyen: Le micrococcus neoformans, Bull. et mem. Soc. anat. de Par., 1905, lxxx, 457-460, also 467, 529, 534; Rev. de therap. med. chir. Par., 1905, lxxii, 226-230.

Doyen: Bull. med., Par., 1904, xviii, 909; Bull. et mem. Soc. anat. de Par., 1905, lxxx, 207-209; Bull. et mem. Soc. de chir. de Par., 1905, n. s. xxxi, 698-732.

Doyen: Rev. de Therap. med.-chir., 1904, lxxi, 721-731; Semaine medicale, 1905, 490, also Oct. 10, 1906.

Doyen: Bull. et mem. Soc. anat. de Par., 1906, lxxxi, 40-43; Rev. de therap. med. chir., Par., 1905, lxxii, 728-731.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending March 9, 1907:

Carroll, James, surgeon, appointed surgeon with the rank of major, from March 2, 1907.

McAlister, John A., dental surgeon, left Presidio of Monterey, Cal., for Fort Sheridan, Ill., for duty.

Stallman, George E., dental surgeon, ordered from Fort Sam Houston, Texas, to Fort McIntosh, Texas, for duty.

Millikin, John D., dental surgeon, returned to Fort Leavenworth, Kans., from duty at Fort Riley, Kans., and ordered to Fort Des Moines, Iowa, for one month, and Fort Omaha, Nebr., for twenty days.

Gregory, Verdo B., contract surgeon, relieved from duty at Fort Adams, R. I., and ordered to Janesville, Wis., for annulment of contract.

Chase, Alpha M., contract surgeon, returned to duty at Fort Sam Houston, Texas, from leave of absence.

Navy Changes.

Changes in the Medical Corps, U. S. N., for the week ending March 9, 1907:

Schwerin, L. H., acting asst.-surgeon additional duty on board the *Florida*.

Plummer, R. W., P. A. surgeon, detached *Denver* to Chicago Recruiting Station.

Stepp, J., P. A. surgeon, detached *Don Juan de Austria*, to *Denver*.

Shaw, H., P. A. surgeon, commissioned P. A. surgeon from Oct. 28, 1906.

Jenness, B. F., P. A. surgeon, commissioned P. A. surgeon from Nov. 11, 1906.

Hyden, R., Valz, E. V., Smith, F. W., asst.-surgeons, appointed asst.-surgeons from March 5, 1907.

Schwerin, L. H., acting asst.-surgeon, detached temporary duties on *Florida* to resume duties Naval Hospital, Norfolk, Va.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and noncommissioned officers of the Public Health and Marine-Hospital Service, for the seven days ended March 6, 1907:

Stoner, G. W., surgeon, granted leave of absence for two days in February, 1907, under the provisions of Paragraph 189 of the Regulations.

Rosenau, M. J., P. A. surgeon, directed to proceed to Harrisburg, Pa., for special temporary duty, on completion of which to rejoin his station in Washington.

Burkhalter, J. T., P. A. surgeon, granted leave of absence for two days in February, 1907, under the provisions of Paragraph 191 of the Regulations.

Salmon, T. W., asst.-surgeon, granted leave of absence for one day in February, 1907, under the provisions of Paragraph 191 of the Regulations.

Frost, W. H., asst.-surgeon, granted leave of absence for one day.

de Valin, Hugh, asst.-surgeon, granted leave of absence for one day under the provisions of Paragraph 210 of the Regulations.

Kennard, K. S., acting asst.-surgeon, granted leave of absence for one day in February, 1907, under the provisions of Paragraph 210 of the Regulations.

McLarty, A. A., acting asst.-surgeon, granted leave of absence for 30 days from February 26.

Stearns, H. H., acting asst.-surgeon, granted leave of absence for two days in February, under the provisions of Paragraph 210 of the Regulations.

Wilson, J. G., acting asst.-surgeon, granted leave of absence for three days in February, 1907, under the provisions of Paragraph 210 of the Regulations.

Wilson, R., acting asst.-surgeon, excused from duty for a period of 15 days without pay, from March 16, 1907.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended March 8, 1907:

SMALLPOX—UNITED STATES.

California: Los Angeles, Feb. 16-23, 2 cases.
Florida: Jacksonville, Feb. 16-23, 1 case.
Georgia: Augusta, Feb. 19-26, 2 cases.
Indiana: Indianapolis, Feb. 17-24, 1 case; La Fayette, Feb. 18-25, 2 cases.
Iowa: Cedar Rapids, Feb. 1-28, 1 case; Davenport, Feb. 14-28, 3 cases; Des Moines, Nov. 22-Feb. 22, 16 cases; North English, Dec. 1-Feb. 10, 75 cases.
Louisiana: New Orleans, Feb. 15-22, 8 cases, 1 death.
Michigan: Detroit, Jan. 26-Feb. 2, 8 cases, Feb. 9-23, 13 cases.
Missouri: St. Joseph, Feb. 16-23, 25 cases; St. Louis, Jan. 26-Feb. 2, 1 case.
New York: New York, Feb. 16-23, 1 case.
North Dakota: General, Sept. 1-30, 4 cases, 1 death; Oct. 1-31, 14 cases.
Ohio: Cincinnati, Feb. 22-March 1, 1 case.
Oregon: Milton, Jan. 10-Feb. 23, 10 cases.
Pennsylvania: Homestead, Feb. 14-28, 2 cases.
South Dakota: Sioux Falls, Feb. 16-23, 1 case.
Washington: Spokane, Feb. 18-23, 10 cases; Tacoma, Feb. 2-9, 1 case.
Washington: Spokane, Feb. 16-23, 10 cases; Tacoma, Feb. 2-9, 1 case.
Wisconsin: La Crosse, Feb. 16-23, 1 case; Milwaukee, 9 cases.

SMALLPOX—FOREIGN.

Africa: Cape Town, Jan. 12-19, 1 case.
Argentina: Buenos Ayres, Jan. 5-12, 8 cases.
Brazil: Rio de Janeiro, Jan. 13-20, 3 cases, 1 death.
Canada: Nova Scotia: Digby County, Feb. 23, present; Halifax, Feb. 16-23 (on S. S. *Pomeranian*), 1 case, (imported); Toronto, Feb. 16-23, 2 cases; Yarmouth County, Feb. 23, present.
Chile: Coquimbo, Feb. 2, 25 cases, 1 death; Iquique, present.
China: Hongkong, Jan. 12-19, 3 cases, 2 deaths.
Ecuador: Guayaquil, Jan. 1-31, 23 deaths, Jan. 26-Feb. 9, 3 deaths.
France: Paris: Feb. 2-9, 7 cases.
Great Britain: Bristol, Feb. 2-9, 2 cases; Cardiff, 4 cases, 1 death; Liverpool, 1 case; Manchester, 1 case; Southampton, 1 death.
Italy: General, Jan. 31-Feb. 7, 8 cases.
Luxemburg: Canton Remich, Jan. 26-Feb. 9, 12 cases.
Madeira: Funchal, Feb. 10-17, 1 case, 1 death.
Mexico: Aguas Calientes, Feb. 9-16, 8 deaths.
Netherlands: Flushing, Feb. 9-16, 2 cases.
Persia: Gilan Province, Nov. 1-30, present; Kermanshah, present; Mash-Had, Dec. 31, present; Tourmat-I-Haidari, Oct. 1-Nov. 20, 56 cases.
Russia: Odessa, Feb. 2-9, 19 cases, 4 deaths; St. Petersburg, Jan. 26-Feb. 2, 1 case.
Spain: Seville, Jan. 1-31, 22 cases.

YELLOW FEVER.

Ecuador: Buday, Feb. 13, 1 death; Duran, Feb. 14, present; Guayaquil, Jan. 1-31, 22 deaths, Jan. 26-Feb. 9, 3 deaths; Huigra, Feb. 8, 1 case, 1 death.

CHOLERA.

India: Bombay, Jan. 22-29, 2 deaths; Cochin, Jan. 14-22, 2 deaths; Madras, Jan. 19-25, 2 deaths; Rangoon, Jan. 12-19, 6 deaths.

PLAGUE.

Brazil: Rio de Janeiro, Jan. 13-20, 9 cases, 3 deaths.
Chile: Antofagasta, Feb. 2, 8 cases, 2 deaths; Taltal, Jan. 31, epidemic.
Egypt: Alexandria, Feb. 4-6, 1 case, 1 death; Ismailia, Jan. 28-29, 2 cases, 1 death; Suez, Feb. 3, 1 case, 1 death; Assiout Province, Jan. 29-Feb. 6, 3 cases, 3 deaths.
India: Bombay, Jan. 22-29, 51 deaths; Rangoon, Jan. 12-19, 18 deaths.
Japan: Formosa, Dec. 1-31, 202 cases, 184 deaths.
Mauritius: Dec. 6-20, 44 cases, 28 deaths.
Peru: Callao, Jan. 14, 1 case; Cataclos, 8 cases, 2 deaths; Chiclayo, 16 cases, 10 deatas; Lima, 3 cases, 3 deaths; Mollendo, 2 cases, 1 death; Pascasanayo and San Pedro, 30 cases, 10 deaths; Paita, 5 cases, 3 deaths; Trujillo, 21 cases, 12 deaths.
Turkey in Asia: Djeddah, Jan. 11-20, 17 cases, 16 deaths.

V 4
190

Society Proceedings

COMING MEETINGS.

Assn. of American Med. Colleges, Richmond, Va., May 6, 1907.
Medical Society of Missouri Valley, Omaha, Neb., March 21-22, 1907.
American Association of Anatomists, Madison, Wis., March 27-29.
Med. Assn. of District of Columbia, Washington, April 2.
Tennessee State Medical Assn., Nashville, April 9.
Mississippi State Medical Association, Gulfport, April 10.
South Carolina Medical Association, Bennettsville, April 10.
Medical Assn. of State of Alabama, Mobile, April 16.
Florida Medical Association, Tampa, April 17.
Medical Association of Georgia, Savannah, April 17.
Medical and Chir. Faculty of Maryland, Baltimore, April 23-25.

ST. LOUIS MEDICAL SOCIETY OF MISSOURI.

Regular Meeting, held Feb. 16, 1907.

DR. JOHN GREEN, JR., reported the first meeting of the ophthalmic section a success. Of a total of twenty-five members, twenty were present and there were eight contributions to the program.

DR. JESSE S. MYER gave some interesting demonstrations of esophagoscopy on a patient having stricture of the esophagus. He demonstrated three principal uses for the esophagoscope, viz.: diagnosis, removal of foreign bodies, and a most valuable aid in treatment of strictures. He stated that the use of the esophagoscope was attended with no danger if the obturator be removed as soon as the point of the instrument passes the cricoid cartilage, and if the instrument be passed further under direct scrutiny of the operator.

Medical Education at Home and Abroad.

The following papers were read: America, by Dr. John Young Brown; Paris, by Dr. C. G. Chaddock; London, by Dr. Llewellyn Williamson; Berlin, by Dr. A. E. Meisenbach; Other German Universities, by Dr. W. C. Gayler; Vienna, by Dr. Louis Rassieur.

DISCUSSION.

DR. A. RAVOLD said that America has a great deal to offer in facilities for medical education. After a student has finished the prescribed medical course and has spent one or two years in a hospital or with some good clinician, he is ready to look about to learn a specialty. America has splendid laboratories and just as great masters in charge as will be found anywhere. They will take the student as far as they can and push him off into original research. We have the best surgeons the world has produced. The question is, with all these advantages, should one go abroad? It takes a tremendous time to learn a new language. He had a slight knowledge of German, but when he arrived in Germany it all evaporated. For the first five weeks he had difficulty in making his wants known. For the first three months, although studying German six and seven hours per day, he was unable to catch the drift of the lectures at all. During the next three months he was able to catch sentences from the lectures. At the end of a year he could catch the import of most that was said and felt elated over his achievement. After eighteen months he could understand all that was said, translate it mentally, and take notes in English, still unable to think in German. He said he did not believe himself duller than the average student, but that he wanted to tell the truth about medical education abroad. He believes, however, that it pays to study abroad for the great cultural advantages and for the reason that it broadens our views and makes us capable of seeing good in the accomplishments of men in any part of the world.

DR. K. W. MILLICAN said in regard to the statement of Dr. Williamson concerning the poor boarding houses in London for medical students that one should never seek a boarding house in London, but should secure lodgings and take meals out. He said that two nicely furnished rooms could be had in a desirable part of the city for thirty shillings a week, including service such as he had never seen in this country.

DR. J. M. BALL said the reason that European countries had been in the ascendency in medicine up to the present time is because of their centralized form of government. In this country it seems impossible to have proper national control of medical matters because of the question of states rights.

CHICAGO MEDICAL AND CHICAGO PEDIATRIC SOCIETIES.

Joint Meeting, held Feb. 27, 1907.

DR. J. W. VANDERSLICE, President of the latter, in the Chair.

SYMPOSIUM ON SCARLET FEVER.

Etiology and Pathology of Scarlet Fever.

DR. LUDVIG HEKTOEN'S remarks are included in a paper which will appear in THE JOURNAL next month.

Prophylaxis of Scarlet Fever.

DR. HEMAN SPALDING said that scarlet fever is not so generally infectious as measles or smallpox. In a community of susceptibles—those never having had the disease—about 38 per cent. will contract the disease when exposed to it; whereas in a like community, about 90 per cent. will contract smallpox or measles if exposed to those diseases. Only 7 per cent. of those who have never had the disease, above 40 years of age, are attacked when exposed to scarlet fever, and infants under four months of age were rarely attacked.

The proof is strong that the infection can be conveyed through the milk supply. Fruit and vegetables peddled from a house where scarlet fever exists can be the means of spreading the disease. The infection has been conveyed through the mails in letters sent from an infected house.

The prophylaxis consists in separating the sick from the well and destroying all infection emanating from the scarlet-fever patient. No articles of furniture, such as carpets, rugs, curtains, ornaments, books, etc., except the things actually needed for the care and comfort of the patient, should be left in the sick room. The floor of the sick room should be gone over with a mop or cloth wrung out of a disinfectant. All dishes and table utensils used in the sick room should be placed in a disinfecting fluid before being taken from the room. All discharges from the mouth and nose in scarlet fever should be received on pieces of old soft cotton, linen or worn handkerchiefs, and burned at once. Complete isolation should be enforced until all desquamation of the skin is completed, and there is entire absence of discharge from the ears, nose, throat, suppurating glands or inflammation of the kidneys. The time required for scaling will vary from four to eight weeks. A too early termination in cases of scarlet fever and careless and faulty isolation of patients are the most serious problems in the management of this disease in a large city. All cases not properly isolated at home should be taken to a hospital. He laid great stress on the point that after scarlet fever the entire house should be disinfected.

Clinical History and Diagnosis of Scarlet Fever.

DR. JOHN M. DODSON presented a summary of the course and symptoms of scarlatina as presented in 300 cases treated at the Memorial Institute for Infectious Diseases. He described the course of the usual type of moderate severity, and then noted the distinctive features of the more severe forms of the disease. All types of scarlatina are characterized by abruptness of onset and the brevity of the prodromes.

The diagnosis of scarlatina, when typical, is seldom attended with doubt. The sharp onset with vomiting, angina, rapid rise of temperature and pulse, and the prompt appearance of the eruption on the palate and skin, with the striking injection of the fauces and the peculiar tongue, combine to form a picture little likely to be confused with any other disease.

Atypical Cases of Scarlet Fever.

DR. M. P. HATFIELD said that any variation from a typical case of the disease would constitute, in his judgment, an atypical case. He is distrustful of vomiting as pathognomonic symptom of scarlet fever. Fever rises very suddenly, going up almost simultaneously with the vomiting, the backache, the headache or sore throat of which the child complains. He knows of cases of scarlet fever that have come on insidiously with slight malaise, slight indisposition on the part of the child, without any notable elevation of temperature. These cases would run a doubtful course, and yet be followed by a nephritis of the most discouraging character. One should

not rely on the thermometer too implicitly in making a diagnosis of scarlet fever. He places a great deal of reliance on a characteristic angina. As to erythema, there are more variations in this than any single symptom found in the course of the disease. As to desquamation, he saw a case in which there was a sloughing off of the cast of the whole upper lip. In one case the eruption did not extend above Poupart's ligament. This patient made a satisfactory recovery without any drawback. Scarlatina fulminans kills patients by the intensity of the toxins before the physician is able to make a diagnosis. He reported one such case.

Treatment of Scarlet Fever.

DR. ALFRED C. COTTON said the main indications are to support the patient and to aid in the elimination of the toxins. Thus far sera have been disappointing. His results from the use of Marmorek's antistreptococcic serum have not been satisfactory. The treatment of the intoxications, attended with high temperature, should be inaugurated by free catharsis. He believes in the value of mercurials as eliminants. Where the temperature is 104 or 105 degrees persistently, with symptoms of profound intoxication, he has seen beneficial results from cold baths. Where there is delirium and restlessness, quiet is restored and sleep induced by the cold bath, the cold pack or a tepid sponge bath.

DISCUSSION.

DR. H. MANNING FISH spoke of coryza following scarlatina. Nasal catarrh of itself is not dangerous, but if allowed to persist, it may involve the sinuses or it may cause very serious complications of the eye or the brain, or by metastasis implicate other organs. A serious ocular complication following scarlatina is optic neuritis. In these cases treatment should be directed toward the sinuses rather than to the eye. Purulent empyema is the source of cerebral complications, owing to the intimate vascular supply between the cranium, the orbit and the sinuses.

DR. WILLIAM L. BAUM has looked for cases of Duke's disease during the recent epidemic, but has been unable to find a single instance which tallies with the description given by Duke. In the differential diagnosis of scarlet fever, measles, etc., at the Cook County Hospital they rely on examinations of the blood in all doubtful cases. In the mildest forms of scarlatina there is a decided leucocytosis, which is of great importance in the beginning of the disease. The epitrochlear glands are enlarged, and likewise the glands of the groin in about 80 per cent. of the cases. The minimum period of isolation should be six weeks, no matter how mild the attack. He deprecated the practice of those physicians who, to accommodate their patients, want to fumigate houses at the end of three weeks. School inspection, he said, should be a permanent feature.

DR. H. B. HEMENWAY of Evanston referred to the epidemic of scarlet fever in that city. He presented a statistical report of the cases, and gave unmistakable evidence that the epidemic could be traced to infected milk.

DR. H. W. CHENEY saw a series of scarlet fever treated last summer in Vienna with Moser's serum. The action of this serum begins to manifest itself in from eight to twelve hours after injection. A marked fall in temperature occurs, often the temperature drops to normal within twenty-four hours, and continues there or nearly so. The pulse shows much the same change. The rash, when the injection is given, either does not develop or fades away more rapidly than usual. A marked betterment is noted in the general condition of the patient. The serum has been used in the Children's Hospital in Vienna since 1900. Before 1900 the mortality from scarlet fever at this hospital was 15 per cent., and since that time it has averaged less than 9 per cent. The mortality in other hospitals in Vienna, where the serum has not been used during this period, since 1900, has averaged 13 per cent. The serum has been given in over 200 cases, only the severest cases being so treated.

DR. O. TYDINGS said the serious complications attending or following cases of scarlet fever are largely due to diseased conditions of the nasal passages and throat. He believes that if the nose and throat are kept in a healthy condition there will be no sinus or middle ear complications.

DR. H. G. VAUGHAN believes that epidemics of this disease can be traced to infected milk. There have been approximately 110 cases of the disease in Oak Park, and although some suspicion arose as to the epidemic being due to infected milk, this suspicion has not been verified after a most careful examination of the sources of supply.

DR. A. H. BURR believes the epidemic in Rogers Park was due to infected milk supplied by one company.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

SECTION ON GENERAL MEDICINE.

Regular Meeting, held Jan. 14, 1907.

DR. WILLIAM E. HUGHES in the Chair.

Chronic Intestinal Autointoxication.

DR. F. FORCHHEIMER, Cincinnati, said that intestinal autointoxication might be defined as that condition in which toxins formed in the intestines are absorbed by the organism in which they are produced. The use of this term, he said, had been objected to and that of enterotoxismos or intestinal toxemia substituted. Strictly speaking, only that process should be called autointoxication, which is caused by the toxic bodies resulting from metabolism and not due to any exogenous cause such as bacterial activity. Attention was called to an analysis of 77 cases examined by the ordinary clinical methods in which intestinal autointoxication was believed to be present.

Children were excluded because the clinical picture in them differs very much from that in the adult. In concluding the paper Dr. Forchheimer said that if the endeavor were made to get a composite picture in order that the diagnosis of chronic interstitial autointoxication might be made the following would have to be taken into consideration:

1. In the gastro-intestinal tract there are Riggs' disease, various forms of stomach troubles, change in functional activity of the colon and demonstrable retention of feces due to one cause or another.
2. In a large percentage of the cases indican is increased in the urine and a microscope shows in a large percentage of cases calcium oxalate (50 per cent.); uric acid and urates (25 per cent.); red corpuscles (about 30 per cent.) in 28 cases about 33 1/3 per cent.; the alternation of polyuria with oliguria was noted.
3. Half of the female patients had menstrual trouble.
4. Next to Riggs' disease nervous symptoms were present in the largest number of patients. Of these 77 patients 31 had headaches.
5. In a large number (58 out of 77) cardio-vascular changes were observed; over one-half were due to neuroses and to myocardial conditions.
6. Of the 77 patients 50 had locomotor symptoms, gouty joints, but especially muscular symptoms.
7. Twenty-two patients had skin lesions.

From the combination made by various symptoms, the diagnosis of chronic intestinal autointoxication should be easily made, and, as a matter of fact, this is the case in practice, as is shown when this diagnosis is followed by the logical therapeutic measure.

The great difficulty was pointed out of determining the importance of the intoxication in an individual case; whether it produces all the symptoms, whether it is the cause or the result of other conditions, whether it is the product or the predisposing cause. The greatest caution should be taken before chronic intestinal autointoxication should be looked on as the final diagnosis. In the selected cases this diagnosis was made only ten times. In all the other cases the autointoxication was looked on simply as a contributory cause, present and requiring treatment, but not the principal disease.

DISCUSSION.

DR. HOBART A. HARE said that in a large percentage of cases of autointoxication the effects of the toxic materials are exercised on the nervous system, on the muscles and joints, thus producing widely varying symptoms. Certain articles of food produce toxicity, and a case was related in which eggs, some time after being eaten, caused this effect. In some instances the chewing of a rubber band or chewing gum with the expectoration of the saliva aids in the elimination of the toxicity. One class of cases cited was that presenting a particular type of dull con-

stant headache for days or weeks, unrelieved by the ordinary methods nearly always associated with the presence of excessive phosphates in the urine, the urine being alkaline. Another class of cases is unaccompanied by pain, but associated with profound melancholia and depression.

An important point, in Dr. Hare's opinion, is that of the activity of the kidneys in regard to the elimination of poison. He emphasized the need of renal purges instead of simply purges by the bowel. The necessity was pointed out of studying the condition of the bowels in relation to enteroptosis, believing that most of the poisons absorbed under these circumstances are from the intestine and not from the stomach, and that good results can not be secured until the enteroptosis is corrected. The two types of autointoxication were referred to: (1), that due to intestinal absorption; (2), that due to faulty metabolism. These are frequently confused and should be separated. The intestinal cases can be relieved to some extent by renal and intestinal purges and some drugs, while the second is not usually benefited to any great extent by these methods.

DR. DAVID L. EDSALL said that he believes that from the examination of the urine alone the conclusion is not warranted as to whether abnormalities in the urine are the consequences of changes in the intestinal tract or the result of abnormalities in the liver, excretory or various other organs in metabolism.

DR. JOSEPH SAILER said that the subject of gastrointestinal autointoxication has been to him a very hazy one. The chief difficulty in its study is that the work has been based largely on certain symptoms which are by no means pathognomonic of the condition. He attaches much importance to the study of the activity of the ferments in the gastric juice and believes that there are unquestionably a great variety of conditions, both natural and artificial, which have the capacity of inhibiting ferment activity in the stomach, and also a great variety of artificial conditions which have the capacity of limiting the ferment activity in the intestines. Various cases of migraine, he said, can be brought on by certain food, and relieved as soon as the diet is corrected. An interesting group is that in which the symptoms are referable to the peripheral nerves, only relieved by lavage of the stomach, purgation, and other treatment applied usually to the gastrointestinal tract.

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and methods of treatment for the diseases seen especially in every-day practice. Contributions will be welcomed from our readers.]

Angina Pectoris.

Barber, in the London *Practitioner*, states that in a severe attack of angina pectoris, amyl nitrite should be inhaled at once; a capsule, containing 3 or 5 minims, should be broken in a handkerchief and the vapor inhaled. If this fails to give relief in a minute or two chloroform may be tried; this is best administered on a sponge, in a smelling bottle, by the patient himself. For persistent pain morphin, gr. ¼ hypodermically, is required, and in a feeble patient may be counteracted by the injection of liquor strychninæ hydrochloridi (B. P.), min. iii (.01). At the same time the following stimulant should be administered:

℞ Spiritus ætheris
Spiritus ammonii aromatici, ää.....m. xxx 2
Aquæ camphoræ .....fℨi 30

M. Sig.: Give at one dose.

Brandy, fℨss (15.00), may be given instead of the above.

As an alternative for amyl nitrite, 1 or 2 minims of spiritus glycerylis nitratis (U. S. P.), or tablets nitroglycerin, gr. 1/100 (U. S. P.), may be taken. Amyl nitrite usually acts more promptly, but in some cases one of these latter will give relief when amyl nitrite fails.

Tabellæ natrii nitritis.....gr. iiss |15

Sig.: One to four such tablets as required for pain.

In mild cases, or for pain persisting after the attack is much alleviated, hot applications to the precordium are often comforting. When the attack has subsided the patient should rest, avoid all exciting causes and confine himself to a very light diet for the remainder of that day; a milk diet with arrowroot is the best. Alcohol should be avoided.

When these attacks recur a course of nitrites is often very beneficial. The following combination is of service:

℞ Spiritus glycerylis nitratis.....m. i |06
Tincturæ cardamomi compositi.....m. xxx 2|
Spiritus chloroformi .....m. x |60
Aquæ, q. s. ad.....fℨi 30|

M. Sig.: Take at one dose if needed every three to four hours.

Professor Osler recommends increasing the dose gradually every five or six days till headache and flushing are produced. The nitrites may be taken for several weeks. Perhaps the most difficult cases are those in which there is a tendency toward failure of compensation of the heart, as the spiritus glycerylis nitratis may increase this, and the administration of digitalis may bring a return of pain. Patients must be kept in bed while this preparation is being given. Caffein and nux vomica may be more useful than digitalis in these cases.

℞ Spiritus glycerylis nitratis.....m. i |06
Caffeinæ citratæ.....gr. ii |12
Tincturæ nucis vomicæ.....m. viii |50
Syrupi aurantii .....fℨss 2|
Aquæ, q. s. ad.....fℨi 30|

M. Ft. solutio. Sig.: Take one such dose three times daily.

The diet should be of a light farinaceous character. Soft-boiled eggs and fish may be allowed, but in severe cases peptonized milk, or milk and barley water only, should be taken for a short time.

AVOIDANCE OF ATTACKS.

The most important point for the patient who is liable to angina pectoris is the regulation of his life in such a way that he may avoid all forms of exciting cause. The exciting causes are very variable; probably the most common are physical exertion and distension of the stomach, and perhaps emotion. Hurrying for a train, walking fast uphill, all forms of exertion, especially after ingestion of food, must be avoided. Mental excitement, business worry, anger, or emotion of any kind, may set up an attack. Exposure to cold bathing, substances that have a toxic action on the heart, as tea, tobacco, coffee and alcohol, are all exciting causes which must be guarded against. An even, quiet life, free from excitement, with plenty of fresh air and very gentle exercise, is what is needed, warm clothes in the winter, and for the proper action of the skin warm baths are required.

The diet should consist of white, boiled fish, soft-boiled eggs and milk puddings; fresh meat may be allowed, and is best underdone. Plenty of water, or some mineral water, should be taken. Vegetables and other articles likely to cause flatulence must be avoided.

The meals should be taken regularly and no supper allowed. The bowels must be kept acting regularly by a so-called "dinner pill" of aloes and nux vomica, or an occasional dose of calomel, gr. ½ or 1, followed next morning by a saline. A digestive tonic may at times be beneficial.

℞ Sodii bicarbonatis.....gr. xx 1|20
Tincturæ aurantii amari.....m. xx 1|20
Infusi calumbæ (B. P.).....fℨss 15|
Aquæ chloroformi, q. s. ad.....fℨi 30|

M. Sig.: Take one such dose three times daily after meals.

Or:

℞ Acidi nitrohydrochlorici dil.....m. x |60
Tincturæ nucis vomicæ.....m. viii |50
Tincturæ aurantii amari.....m. xx 1|20
Aquæ, q. s. ad.....fℨi 30|

M. Sig.: Take one such dose three times daily after meals.

Of drugs which have a curative action, potassium iodid in doses of from 10 to 20 grains (0.6 to 1.3) three times a day, is strongly recommended by Sir Lauder Brunton in arterial degeneration. It is administered, of course, freely diluted with water, to prevent iodism, and its effect must be

carefully watched. Arsenic and strychnin combined give benefit in some cases.

℞ Liq. strychninæ hydrochloridi (B. P.)
Liq. arsenici hydrochlorici (B. P.), āā..m. iii | 18
Tincturæ aurantii amari.....m. xx | 1 20
Aquæ, q. s. ad.....f℥i | 30
M. Sig.: Take one such dose three times daily after meals.

In neurotic cases potassium bromid is very beneficial and may be added to the alkaline digestive tonic prescribed above. When both anemia and valvular disease of the heart are present, digitalis and iron may be combined:

℞ Tincturæ digitalis.....m. x | 60
Liquoris ferri chloridi.....m. xv | 1
Acidi citrici.....gr. v | 30
Syrupi limonis (B. P.).....m. xxx | 2
Aquæ dest., q. s. ad.....f℥i | 30
M. Sig.: Take one such dose three times daily after meals.

Digitalis must be given very cautiously, as it may bring on the pain. In cases in which there have been premonitory symptoms, the application of the galvanic electric current over the vagus in the neck has effectually warded off the attack.

The great essentials, then, in the treatment of angina pectoris are a quiet life, a wise diet, and the administration of nitrites in an attack. A patient subject to angina pectoris should carry amyl nitrite capsules or the tablets of nitroglycerin, gr. 1/100 U. S. P.

Gibson, in the London *Practitioner*, states that ethyl iodid, otherwise known as hydriodic ether, is also of value in this condition given by inhalation in doses of 5 minims. The drug may be put up in glass capsules. The action is probably due to the liberation of free iodin. It is impossible to foretell whether the nitrites or the iodid series in a given case will give the most benefit. A very serviceable combination is supplied in capsules of ethyl iodid and chloroform, each capsule containing 3 and 10 minims respectively of the two drugs. In Gibson's experience, the chloroform has lessened the discomfort produced by the hydriodic ether.

(This subject will be continued.)

Pruritus Ani.

Cowles, in the *New York Medical Journal*, recommends the following:

℞ Unguenti hydrargyri ammoniati....gr. xxv | 1 60
Adipis benzoinati.....℥i | 30
M. Sig.: Apply locally as directed. Or:
℞ Hydrargyri chloridi mitis.....3ii | 8
Sig.: Use locally as a dusting powder as directed.

If there is much thickening of the skin surrounding the anus some preparation of salicylic acid should be used, for example:

℞ Acidi carbolici.....gr. xv | 1
Acidi salicylici.....gr. x | 60
Ichthyoli.....m. xxiv | 1 60
Petrolati.....℥i | 30
M. Sig.: Apply locally as directed.

A hot sitz bath or the application of hot compresses often confers immediate relief. The following formula is recommended by Morris:

℞ Acidi carbolici.....gr. xx | 1 20
Cocainæ hydrochloratis.....gr. x | 60
Petrolati.....℥i | 30
M. Ft. unguentum. Sig.: Apply locally as directed.

Caution should be taken not to induce the cocain habit.

Leucorrhea.

Hammond, in the *Therapeutic Gazette*, recommends the following to be used in the local treatment of this condition: *Douches.*—These should be bland, consisting of plain hot water or normal salt solution, or they may be astringent. From two to four quarts of water should be used at a time once or twice a day; the douche should be given in the reclining position:

℞ Acidi carbolici.....℥iv 120
Sig.: Eight to ten teaspoonfuls to four quarts of hot water and use as vaginal douche. Or:
℞ Pulveris aluminis.....℥x 300
M. et ft. chart. No. x. Sig.: Dissolve one powder in four quarts of water and use as vaginal douche. Or:
℞ Plumbi acetatis.....3i | 4
Aquæ dest.....f℥iv | 120
M. Sig.: From two to five teaspoonfuls to each quart of water to be used as vaginal douche. Or:
℞ Hydrargyri chloridi corrosivi.....3vi | 24
Aquæ dest.....f℥vi | 180
M. Sig.: One teaspoonful to four quarts of hot water to be used as a vaginal douche. (This makes a solution of 1 to 4,000.) Or:
℞ Zinci sulphatis.....3xx | 80
M. et ft. chart, No. xx. Sig.: Dissolve one powder to each quart of hot water and use as a vaginal douche.

Burtenshaw recommends the following combination:

℞ Pulveris aluminis
Zinci sulphatis
Acidi carbolici
Sodii biboratis, āā.....℥i 30
Aquæ dest., q. s. ad.....℥vi | 180
M. Sig.: Four tablespoonfuls to four quarts of water to be used as a vaginal douche.

Soft Corns.

The *Druggists Circular*, February, 1907, gives the following formula for the treatment of soft corns:

Acidi salicylici
Menthol, āā.....3i | 4
Olei theobromatis.....℥iv | 120

No directions are given, but this preparation may be applied every night after soaking the feet in warm water.

Inaccurate Prescription Writing.

In replying to a correspondent who asks: "What is liquor strychninæ?" the *Druggists Circular* calls attention to the fact that many physicians write prescriptions which leave room for guesswork on the part of the pharmacist. In regard to the article in question it is stated that if the prescription was written by a British physician he probably had in mind the liquor strychninæ hydrochloridi of the British Pharmacopeia, the formula for which is:

Strychninæ hydrochloridi.....gr. xviiss | 1 13
Alcoholis (90 per cent.).....f℥i | 30
Aquæ dest., q. s.....f℥iv | 120

If an American physician wrote the prescription it is probable that he meant the liquor strychninæ acetatis of the National Formulary, the formula for which is:

Strychninæ acetatis.....gr. iii | 21
Acidi acetici dil.....m. xlviii | 3 5
Alcoholis.....f3vi | 25
Tincturæ cardamomi comp.....m. xv | 1
Aquæ, q. s.....℥iii | 100

The strength of the British preparation is one grain of strychnin hydrochlorid to 110 minims, while the strength of the National Formulary preparation is approximately one grain of strychnin acetate to the ounce.

Medicolegal

Must State Way One Holds Himself Out as Physician.

The Supreme Court of Vermont says, in the case of State v. Wilson, that it has been decided by some courts, under statutes prohibiting the practice of medicine without a license, and which enumerated various acts which should be regarded as "practicing medicine," that an indictment charging the offense must allege some one of the acts so enumerated. In this case the material allegation in the indictment, apparently following the language of the statute, was that the respondent "did hold himself out to the public as a physician in this state, without having . . . passed the examination required by law, . . . and without having received a license from the medical registration . . . to practice as a physician." But it is held that this was not sufficient. The court says that there are various ways in which the respondent might have held himself out to the public as a physician, and he was entitled to know in what manner the state claimed he "held himself out" before he was compelled to plead. As the rule is sometimes stated, the allegation must descend far enough into particulars, and be certain enough in its frame of words to give the respondent reasonable notice of what will be produced against him at the trial. The court thinks that the alle-

gation in this indictment did not fulfill the respondent's right under the constitution "to demand the cause and nature of his accusation."

City and County Both Liable for Smallpox Expenses.

The Court of Appeals of Kentucky says, in the case of Pulaski County vs. City of Somerset, that in the year 1900 an epidemic of smallpox existed in said county, within and without said city. Both the county and city had a board of health appointed as required by statute. There arose a conflict of opinion between those residing within the city and without as to whether the county or city should bear the expense of treating and guarding the persons afflicted. At a meeting of the members of the fiscal court of the county and the members of the city council, together with the members of both boards of health, it was agreed between all parties that the county and city, through their proper boards, should jointly provide means and care for all persons afflicted with contagious diseases, and to provide guards so as to prevent the spread of the disease. Later it appeared that the city concluded that the county was responsible for the whole of the expense incurred. But the court holds that, under the statute with reference to the question involved, there was no doubt that both the city and county were responsible for the expense; the city for that incurred in treating those afflicted within the city limits, and the county for that in treating those so afflicted without the city.

Different Community Requirements Recognized.

The Supreme Court of Wisconsin says, in the case of State vs. Evans, that it is not only desirable that drugs be dispensed to the public by skilful and competent persons to avert peril from occasional mistakes, but it is far more desirable, nay, practically essential, that medicines be within prompt and easy reach by the public. The danger to life or health to be expected from occasional error of an incompetent salesman is hardly comparable to the injuries likely to result from exclusion of whole communities from opportunity to obtain the ordinary remedies often essential momentarily to save lives. It is, therefore, within the field of legislative discretion to provide only such restrictions as to competence of the dispenser as will not unduly prevent dealing in medicines. The court is fully persuaded that legislators, within the bounds of reason, might have believed that this result could be obtained in the large communities consistently with requiring the competence, age and experience prescribed for registered pharmacists, but that, in very small or sparse villages and towns, in many cases, the profits would not be sufficient to attract such men, and such communities might be left unprovided; that thus the very force of nature and human nature had created a class distinguished in respects directly relevant to the subject of protection of life and health by regulating the dispensing of medicines, and therefore proper of recognition and differentiation in framing laws on the subject. If a given restriction which tends to protect lives and health in one class of communities will menace them in another, the very imposition of it generally and without exception might be most obvious and oppressive discrimination.

Physical Conditions to which Spouse Could Testify.

The Supreme Court of Utah says that in the personal injury case of Davis vs. Oregon Short Line Railroad Company the plaintiff's wife testified that prior to the accident her husband's health was good. Then, over the objection of the defendant's counsel, she was permitted to answer the question "whether he was affected with pains in his back and side," prior to the accident; also, whether his condition was different from one time to another, and what the facts had been and were at the time immediately after the injury with reference to his being lame. The court holds there was no error in this. It says that the witness was the plaintiff's wife, and had lived with him for many years, was in attendance on him during his illness, and was in a position to observe and to inform herself of his general physical condition as it was, both before and subsequent to the time he was injured. The rule is well settled that a non-expert witness, having been in constant attendance on a person, and having had the opportunities for observing the movements and general physical condition of such person, as the record showed were afforded Mrs. Davis in this case, is competent to testify whether the person is in good or poor health, and whether such person is afflicted with pains, or is free from pain.

Likewise, the Court of Civil Appeals of Texas holds, on the appeal of the St. Louis Southwestern Railway Company of Texas vs. Lowe, that questions asking a husband whether his wife had ever had any cough, lung or female trouble prior to a certain exposure to cold at the railway company's depot were not subject to the objection that they called for the opinion of the witness. Whether his wife had ever had a cough, lung or female trouble prior to such exposures were questions of fact, about which he was competent to testify, and his testimony in relation thereto was the statement of a fact, not merely the expressions of an opinion.

Period of Gestation—Cross-Examination from Books.

The Supreme Court of Iowa holds in the case of State vs. Blackburn, a prosecution for rape, that objections to the testimony of physicians called as witnesses for the state as to the usual time of the gestation, it appearing that the prosecuting witness had given birth to a child 299 days after the alleged connection with the defendant, were not well taken, as the testimony of the witnesses tended to show that the period of gestation might extend beyond that length of time. It says that while the paternity of the child was not a fact necessary for the state to establish in order to make out the crime, the birth of a child within a possible period of gestation after the alleged connection would tend to corroborate the testimony of the prosecutrix as to the fact of such connection.

The court also holds that there was no error in the prosecution being allowed, on cross-examination of physicians testifying as experts for the defendant with reference to the period of gestation, to refer to statements found in medical textbooks on the subject which the witnesses stated were standard authorities, and to ask the witnesses whether they agreed with the statements found in such text-books. This line of examination was objected to on the theory that the prosecution was thus allowed to put in evidence the statements found in such text-books. This court has held that medical books can not be introduced as independent evidence. And in State vs. Thompson, 127 Iowa, 440, it is said that it is not proper to get the statements of such books into the record as independent evidence by asking a witness whether certain books do not contain statements quoted by counsel from them. But in these cases the objection is to the statements in the books as independent evidence. There is nothing to indicate that the usual practice of cross-examining a medical witness by calling his attention to statements in books admitted by him to be standard is improper.

Sufficient Evidence of Abortional Advertising.

The Supreme Judicial Court of Massachusetts in the case of Commonwealth vs. Hartford, overrules exceptions to a conviction on an indictment, under the statute of that state, charging the defendant with knowingly distributing a circular or advertisement giving notice of a place where illegal operations might be performed on pregnant women. It says, among other things, that, while the acts made criminally punishable are distinct from the crime of procuring an abortion, evidence describing the rooms with their furnishings, the envelopes addressed to physicians containing similar cards, and her statements relating to the origin of her acquaintance with the officer to whom she had given the card described in the indictment, was properly admitted, not only as being descriptive either of the defendant's place of business, or of her employment, but also as indicative of her guilty knowledge of its contents. It is true that mere possession of this card was not a crime, for the offense charged was its distribution or circulation as a paper conveying information where operations were performed for the purpose of procuring the miscarriage of pregnant women, but if intentionally handed to a patient who was seeking such treatment the offense would

have been complete, and this equally would be true if the receiver was inquiring as to similar aid in behalf of a proposed patient. The weight of the defendant's argument, therefore, was that because it was procured by false representations there was no proof either of distribution or of circulation. Generally solicitation to commit a crime to which the party solicited yields does not exonerate the wrongdoer, or exempt him from prosecution, and under the statute it is the circulation or distribution with guilty knowledge which is made unlawful, although patients may not be obtained. The intention with which it is put out is the controlling element, and if the defendant issued the card as an advertisement containing the information sought this would be a violation of the statute. If from a desire to obtain patronage she chose to rely on the officer's statements rather than to require any corroboration before acting on them such conduct would neither lessen her criminal responsibility, nor render his testimony incompetent if the jury were satisfied that it was delivered voluntarily with a criminal purpose, which was clearly and accurately explained in the instructions given.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Boston Medical and Surgical Journal.

February 28.

1 *Study of Hydronephrosis. A. T. Cabot, Boston.
2 *Surgical Treatment of Tuberculosis of the Kidney. F. S. Watson, Boston.
3 *Tuberculosis of the Kidney. P. Thorndike, Boston.
4 *Experimental Studies in Arteriosclerosis. O. Klotz, Montreal, Canada.
5 Visceral Arteriosclerosis. H. Brooks, New York.
6 Innervation of the Uterus. W. L. Burrage.

1. **Hydronephrosis.**—A number of cases are reported by Cabot for the purpose of calling attention to the confusion which still exists as to the relations of false and true hydronephrosis. In true hydronephrosis the sac which contains the fluid is the distended pelvis of the kidney, while in false hydronephrosis the fluid is contained in a sac outside the kidney. One case is reported in which both conditions coexisted in connection with one kidney. This was properly a case of congenital hydronephrosis, although the dilatation of the kidney was not noticed until some years after birth. A congenital obstruction of the ureter, by looping over a vessel, was responsible for the condition. In another case cited the obstruction seemed to be a valvular one at the junction of the ureter with the renal pelvis. In this case a nephrotomy was done as a preliminary to a nephrectomy with excellent results.

2. **Surgical Treatment of Tuberculosis of Kidney.**—Watson's beliefs in regard to the surgical treatment of tuberculosis of the kidney are in accord with those entertained by other writers on this subject.

3. **Tuberculosis of Kidney.**—Thorndike believes that in the comparatively small but constantly increasing number of patients in whom the diagnosis can be made before much destruction of kidney tissue or involvement of other organs has taken place, hygiene and climate should have a chance before the kidney is removed. He believes that this treatment will often do away with the necessity for an operation. For the more numerous later cases nephrectomy is always the operation of choice, and should be done in every instance, if the patient can stand it and if he has another kidney capable of doing a fair amount of work, whether the disease has passed beyond the limits of the organ to be removed or not, and whether the other kidney be involved or not.

4.—See abstract in THE JOURNAL, Jan. 19, 1907, page 266.

St. Louis Medical Review.

February 23.

7 *Extraordinary Anatomic Curiosity. H. J. Scherck, St. Louis.
8 Gallstones. N. F. Baker, Fulton, Mo.
9 Diagnosis of Gallstones. R. Hill, St. Louis.

7. **An Anatomic Curiosity.**—In the case reported by Scherck the thumbs presented the appearance of a long forefinger, and the Roentgen ray showed that there was an extra phalanx in each thumb. There was perfect control of the last phalanx and the joint could be bent without trouble. The thumbs were long and tapering, and the nail of each thumb was set more on the dorsal aspect of the digit than is usual in normal cases.

New York Medical Journal.

March 2.

10 *Trypsin in Cancer. W. S. Bainbridge, New York.
11 New High-Frequency Devices. H. G. Piffard, New York.
12 *New Bed Frame; also an Apparatus for Application of Body Casts. C. M. Fauntleroy, Philadelphia.
13 *Study of Shreds in Urine in Their Relation to Diagnosis and Prognosis. D. Saxe, New York.
14 Accessory Sinuses of the Nose from the Rhinologic Standpoint. C. W. Richardson, Washington, D. C.
15 Accessory Sinuses of the Nose from an Ophthalmologic Standpoint. W. C. Posey, Philadelphia.
16 *Acid Intoxication. C. G. L. Wolf, New York.
17 *Appendicitis. B. S. Talmey, New York.

10. **Trypsin in Cancer.**—Bainbridge has employed trypsin in a few cases with unsatisfactory results. He cautions against the formation of premature conclusions in any case in which the trypsin treatment is employed and refers in particular to one case which had been under his care and which had been reported by others as a cure. He says that the observations made thus far are too incomplete to warrant making any definite statements as to the value of this treatment. It should be tested scientifically, and while it is being so tested all judgment as to its efficacy should be suspended.

12. **New Bed Frame.**—The frame described by Fauntleroy is made from three-eighths iron piping bent at right angles at each of the four corners and cut through the middle of the cross bars, which have on their inner surface, around the lumen of the pipe, a series of right and left hand threads to receive the corresponding threads on the screws at each end of the frame. The threads extend into the cross bars for about three inches on each side of the cut ends. Threads of the same length are on the end screws on each side of the taps; this enables the frame to be increased in width about six inches if desirable, by simply turning the end screws by means of a small wrench fitted to the tap. The cover for the frame is made of heavy canvas, and is in two parts. Each half is made in the form of a bag, one of which is a little longer than the other; these bags are closed on both sides and at one end by reinforced stitches, thus giving an amply strong cover that will safely withstand sufficient tension. The bags are slipped on over the ends of the frame and are provided at the center of the closed end with a small opening, which leaves uncovered only the tap on the end screws, thus making it perfectly easy to apply the wrench, and by turning the tap to increase the width of the frame, thereby making the cover as tense as desirable. As the frame is covered on both sides alike, it is only necessary to reverse it should it become soiled by food, etc., accidentally spilled, or by the body excretions as may occur from incontinence due to pressure myelitis in bad cases of Pott's disease or from other causes. The bed frame is made in different lengths to accommodate children ranging in years from 3 to 14.

13. **Study of Shreds in Urine.**—Saxe presents the results of a study of shreds in the urine in a large number of cases of urethritis and prostato-vesiculitis. The method of staining the shreds is as follows: 1. Fix with alcohol and ether for ten minutes (or imbed in collodion; dry and soak in water for ten minutes). 2. Stain for from one to two minutes in Unna's polychrome methylene blue. 3. Wash well in distilled water. Dry. 4. Dehydrate for a few seconds in 95 per cent. alcohol. Dry with filter paper. 5. Clear in xylol or in clove-thyme mixture. Dry with filter paper. 6. Mount in balsam. Saxe found that the study of shreds is not of great value in the localization of the affection in the anterior or the posterior urethra, but that the presence of prostatic or vesicular shreds which can be recognized microscopically is an aid to the localization of the process. The study of urethral shreds is valuable in determining the stage of the process. In the prognosis the variety of urethral shreds present is of limited usefulness. The fewer the shreds and the fewer the pus cells, the better the prognosis, and vice versa.

V 4
190

16. Acid Intoxication.—Wolf discusses the condition designated as acid intoxication or acidosis. He says that acidosis is not synonymous with acid intoxication. It is a distinct entity which he defines as being the production through a faulty metabolism, or otherwise, of acid products which may or may not produce intoxication. Wolf claims that on the surface the theory of acid intoxication is altogether plausible, and has the advantage of fitting in with certain clinical data. When it is subjected to strict criteria, however, it fails to stand the test. It also has the very unfortunate property of leading one to diagnosticate as toxemias clinical conditions the urinary symptoms of which are entirely due to insufficient food intake. From this standpoint it is in the hands of many a positive clinical menace.

17. Appendicitis.—Talmey reports two cases of appendicitis with delayed operation in which abscesses were found in other parts of the abdomen. In the first case cited the appendix was found gangrenous and what was left of it was removed. Fourteen months later the patient again suffered with pain in the lower abdomen. This was found to be due to the presence of about half a pint of pus in Douglas' pouch. In the second case the abscess extended from the cecum to the vault of the diaphragm beneath the liver. The patient died two days after the abdomen was opened. Talmey also reports two cases to show the difficulties that sometimes attend the diagnosis of appendicitis.

Medical Record, New York.
March 2.

18 *Influenza in Its Relation to Diseases of the Nervous System. J. Collins, New York.
19 *Relation of the Tonsil to Infection and Infectious Diseases. R. C. Brown, Milwaukee.
20 A New Streptothrix Pathogenic for Cattle. C. F. Kieffer, Fort D. A. Russell, Wyoming.
21 *Preservation of Hearing. W. S. Bryant, New York.
22 *Case of Acute Edema of the Pharynx. G. Link, Indianapolis.
23 Case of Trichinlasis. J. M. Ferrer, New York.

18. Influenza in Relation to Nervous System.—Collins says that the baneful effects of the pathogenic activity of the Pfeiffer bacillus on the nervous system have been overestimated, and that in reality influenzal and postinfluenzal neurosis and psychoses are not very common. The bacillus of influenza may and does cause meningitis, encephalitis, myelitis and possibly neuritis. The toxins produced by the pathogenic activity of the influenza bacillus are adequate exciting causes of neurasthenia and psychasthenia, of neuritis and neuralgia, of various forms of insanity, of independent nervous systems, such as insomnia, vertigo, headache, and they may be contributory to the causation of any disease that afflicts the human being. Nevertheless, neither the bacillus of Pfeiffer nor its toxins, he declares, is a common cause of nervous disease. The disorders of the nervous system that stand most frequently in causative relation to influenza are those dependent not on the direct action of the bacillus of influenza on the nervous system, but on the activity of toxins produced by the pathogenic activity of these germs. These are neurasthenia and psychasthenia, neuralgia and neuritis, and diseases and disorders of the nervous system attending and dependent on arteriosclerosis.

19. Relation of Tonsil to Infection.—Brown shows how admirably, from an anatomic standpoint, the tonsil is arranged to resist infection. Inflammation of the tonsil is caused by a pathogenic germ which is endeavoring to enter and the inflammation itself is a defensive reaction. When the resistance of the body is lowered, or the germs are virulent enough to overcome the other means of defense, or if the tonsil is wounded, a positive chemotaxis having been produced, there is a lacunar tonsillitis. When a negative chemotaxis is produced there is a general systemic infection without a tonsillitis. Finally, the relation of the tonsil to infection and infectious diseases is one of protection.

21. Preservation of the Hearing.—Bryant believes that early observation will detect insidious conditions which cause over 95 per cent. of deafness, and that judicious treatment will cure these conditions before serious impairment of hearing has taken place. He suggests that the otologist should be consulted once a year, after every cold, and whenever anything unfavorable is noticed in the ear.

22. Acute Edema of the Pharynx.—In the case reported by Link an acute edema of the pharynx and unconsciousness followed an attack of simple tonsillitis of ten days' duration. A speedy and successful tracheotomy was done.

Illinois Medical Journal, Springfield.
February.

24 *Treatment of Senile Gangrene. E. H. Ochsner, Chicago.
25 Pneumonia. R. H. Bradley, Marshall, Ill.
26 The Law as to Expert Testimony in Illinois. W. A. Evans, Chicago.
27 *Surgery of the Gall Bladder. M. W. Bacon, Chicago.
28 Renal Functional Tests and Diagnostic Methods of Nephrectomy, Nephrotomy, Nephropexy and Ureteral Surgery. F. A. Leusman, Chicago.
29 Diabetes, Not a Disease *Per Se*. S. A. Orem, Lewistown.
30 Serious Surgical Emergencies. J. A. Day, Jacksonville.
31 *Congenital Stenosis of Pylorus. H. W. Cheney, Chicago.
32 *Prescribing. H. J. Achard, Elgin.

24.—See abstract in THE JOURNAL, Jan. 12, 1907, page 162.

27. Surgery of the Gall Bladder.—Bacon reports 14 cases of disease of the gall bladder to emphasize the value of conservatism and of drainage in the operative treatment. In a series of 100 cases the mortality was only 3 per cent. Among the cases reported are the following: Acute cholecystitis with a large stone in the cystic duct, 2 cases; calculi in the gall bladder with previous inflammatory attacks and adhesions, 2 cases; acute cholecystitis with thickened gall bladder from previous attacks of inflammation and obstruction of cystic duct by calculi, 2 cases; hydrops of gall bladder with obstruction of cystic duct by calculi, 2 cases; acute cholecystitis with thickened gall bladder and obstruction of cystic duct without calculi, 2 cases; empyema of gall bladder, with one stone 4¾ inches long, 1 case; carcinoma of gall bladder (patient died ten days after an exploratory operation), 1 case; acute obstruction of common duct by calculi, 2 cases.

31. Stenosis of Pylorus.—Cheney reports a typical case of hypertrophic stenosis of the pylorus in which a successful operation was done. Symptoms first manifested themselves when the infant was four and one-half weeks old. The baby vomited two or three times a day. A gastroenterostomy was done the morning of the eighth day after the appearance of the first symptom.

32. Prescribing.—The proprietary medicine question is discussed by Achard, who insists that physicians ought never to be asked to use or to prescribe any preparation unless they are fully and freely informed of its composition. The use of proprietary articles has often made physicians lose sight of the fact that they must prescribe for conditions rather than for names of diseases; that they must attend to the underlying causes and treat the symptoms as they arise. Achard says that prescribing is not copying ready-furnished formulas, but is an art which involves an intelligent comprehension of a symptom-complex, and the knowledge of how to meet the requirements of the case. Achard speaks of the use of ready-made preparations as lazy, unscientific and not quite honest. He suggests that it is better to master thoroughly and to use twenty remedies which admit of a greater variety of combinations than to know the names of a hundred compounds and to prescribe them according to directions on the label.

American Journal of Medical Sciences, New York.
February.

33 *Symptomatology, Diagnosis and Surgical Treatment of Cervical Ribs. W. W. Keen, Philadelphia.
34 *Compulsory Vaccination, Antivaccination and Organized Vaccination. G. Dock, Ann Arbor, Mich.
35 *Clinical Manifestation and Treatment of Acute Cardiac Dilation. B. Robinson, New York.
36 *Experimental Studies of Cardiac Murmurs. W. S. Thayer and W. G. MacCallum, Baltimore.
37 *Aneurism of Arch of Aorta: Rupture into the Superior Vena Cava. M. H. Fussell, Philadelphia.
38 *Different Forms of Albumin Occurring in the Urine. T. W. Hastings, and B. R. Hoobler, New York.
39 *Pathology and Treatment of Nephritis. P. W. Webster, Chicago.
40 *Roentgen Rays in Unresolved Pneumonia. D. L. Edsall and R. Pemberton, Philadelphia.
41 *Study of Diphtheria Epidemic at the Adirondack Cottage Sanitarium for Incipient Tuberculosis. L. Brown, A. H. Allen, and E. J. S. Lupton, Saranac Lake.
42 Chemical Affinity of Mucus for Hydrochloric Acid. N. B. Foster.

33. **Cervical Ribs.**—Keen reports the history of a patient on whom he operated and discusses all cases recorded in the literature in which an operation was done.

34. **Vaccination.**—Dock believes that recent epidemics of smallpox show conclusively the need of more vaccination. He says that what is needed is not statutory compulsion, but an organized and scientific procedure that shall have the confidence and support of a large majority of the people and that shall have no weak spots in any part. The present methods make certain a high ratio of smallpox cases with an unduly low protection to the individual. There is nothing, he asserts, in the fundamental law of the land to prevent the passage of safe and efficient vaccination laws, which should aim at a widespread protection by vaccination and revaccination. The operation itself should be a matter of permanent record, and a certificate from an authorized official should be proof of the vaccination of each individual. The operators should be trained for their work, familiar with the vaccination laws, and bound to follow them. Dock would control the manufacture of vaccine by competent experts. He says that vaccination should be done at fixed times of the year when epidemic diseases are not most prevalent, in places appointed and equipped for the purpose; the individual should be examined after the operation at a time fixed by the regulations, or at once on suspicion of complication. He would permit private vaccination only under special conditions with revision of the result by a competent health officer.

35. **Acute Cardiac Dilatation.**—Three varieties of cardiac dilatation are considered by Robinson: 1. The cardiac dilatation which shows itself during the course of some acute infectious disease. 2. The cardiac dilatation of nervous origin, due primarily many times to the wear and tear of an anxious and working life, but in which the strain falls far more directly on the brain and nervous system generally than on the muscular make-up of the body. 3. The rapid or sudden cardiac dilatation which comes to those whose excesses in eating or drinking or the use of tobacco are notable and long continued and who are unable to bear even temporary physical strain without experiencing painful threatening or alarming effects which become manifest very soon or immediately after the exertion.

36. **Cardiac Murmurs.**—Having studied the character of the heart sounds of the normal dog, Thayer and MacCallum have produced, as far as possible, the lesions commonly observed in man, each in several cases. In other experiments they have made a few observations concerning the development of functional basic murmurs. The authors suggest that when auscultation is taught in small sections, several exercises in the study of experimental cardiac murmurs in the dog would do more toward making clear in the mind of the student the essential facts, without which rational diagnosis of cardiac lesions is impossible, than any other method of instruction. Aortic and pulmonic stenoses were produced by the passage of a cord about the vessel just above the valves. Aortic insufficiency was produced in eight instances. The nearest approach that was made to producing a mitral stenosis was to apply a clamp at about the position of the mitral ring. In six cases mitral insufficiency was produced by tearing the valves of chordæ tendinæ with a knife hook.

37. **Aneurism of Arch of Aorta.**—Fussell reviews 36 recorded cases and adds one case of his own of aneurism of the arch of aorta which ruptured into the superior vena cava. The diagnostic signs of this occurrence are said to be a sudden cyanosis, edema and dilatation of the veins of the face, head, neck, arms and chest; a peculiar, continued high-pitched murmur, present in about half the cases, and the physical signs of aneurism of the aorta.

38. **Forms of Albumin in Urine.**—Out of 5,330 specimens examined by Hastings and Hoobler, 4,068 showed reactions for albumin by heat and acid, or by salting or heat and acid, or by both. Nucleoalbumin alone was found in 839 of the specimens. The authors claim that albuminuria does not, necessarily, nor does it usually, indicate nephritis; but it may be indicative of nephritis, and, therefore, can not be disregarded in diagnosis. Albuminuria with casts is good evidence of nephritis, either temporary or permanent, in conditions showing the other evidences of Bright's disease. In no instance did nucleoalbuminuria alone occur in a case which suggested in any way nephritis. In only one instance was serum albumin absent in a case with the clinical diagnosis of nephritis. The authors emphasize the frequency of non-renal albuminuria and the occurrence of nucleoalbuminuria alone in a large percentage of cases. They recommend the addition of saturated salt solution with subsequent heating and acidifying with acetic acid as the safest test for serum albumin.

39. **Nephritis.**—Webster discusses the modern conceptions of nephritis, the influence of cardiovascular changes, albuminuria and cylindruria, chlorid retention, edema, uremia and the treatment of nephritis. He says that it is important to recognize that each case is a law unto itself, and that routine treatment is not only irrational, but condemnatory. He regards the limitation of salt as unnecessary because the theory on which its deprivation is based is not tenable. He considers the surgical treatment of nephritis rational in some cases and successful in many.

40. **Roentgen Rays in Unresolved Pneumonia.**—Edsall and Pemberton report the history of five patients who were treated with Roentgen rays for unresolved pneumonia with most excellent results. The authors state first that no results can be expected unless the duration of the condition has been reasonably short—a few weeks at most—for if organization has occurred a satisfactory result of treatment is almost inconceivable. Second, the condition should be chiefly a real lack of resolution and not a continued inflammation of the lung. Third, it is exceedingly important to determine, so far as possible, that one is actually dealing with unresolved pneumonia and not with tuberculosis. The treatment should be begun tentatively and with brief exposures and small doses until it is determined in the individual case that serious results are not likely to ensue.

41. **Diphtheria Epidemic.**—The epidemic of diphtheria reported on by Brown, Allen and Lupton lasted 51 days. Eleven cases of diphtheria and in 32 other individuals diphtheria bacilli were found on culture. There were no fatalities and no serious complications. In all, over 400 immunizing doses of antitoxin were given to 129 tuberculous and 45 non-tuberculous individuals. In no case did any infection occur. In four instances diphtheria developed between the fourteenth and sixteenth days following the first injection, and in one case four days and in another one day after the second injection. The authors state that in the presence of diphtheria epidemic patients with pulmonary tuberculosis should be treated as regards the diphtheria like otherwise healthy individuals. Mild diphtheria seems to exert little or no harmful influence on the pulmonary lesion in the tuberculous, and the antitoxin in small or large doses seems to have little or no effect on the pulmonary tuberculosis. Immunizing doses may be given patients with fever. Complications seem to occur after diphtheria no more often, probably less, in the tuberculous than in the non-tuberculous.

The Ophthalmic Record, Chicago.

January.

43 *Relief and Cure of Migraine by Correction of Errors of Refraction. A. R. Baker, Cleveland.
44 Stereoscopic Charts for Hyperphoria. D. W. Wells, Boston.
45 Operation for Secondary Cataract Embedded in the Vitreous. R. Denig, New York.
46 *Melanotic Flat Sarcoma of the Choroid with Unusual Clinical Symptoms. G. E. de Schweinitz and C. M. Hosmer, Philadelphia.
47 Cataract Lid Retractor and Fixation Forceps. A. E. Prince, Springfield.
48 Cysticercus Cellulosæ of the Iris: Operation with Perfect Recovery. R. Rembe, Chicago.
49 Sarcoma of the Chorold. W. G. Gilbert, Calais, Me.

43. **Refraction Cure of Migraine.**—Inquiry made of 100 patients suffering from migraine showed Baker that 55 were cured, that is, there was no return of migraine, after the error of refraction was corrected. Thirty-one patients were greatly benefited and seldom had attacks, and when they came the attacks could usually be accounted for by leaving off the spectacles, excessive eye work, worry, indiscretion in eating

and drinking, commencing presbyopia, etc. Of the fourteen patients who were not benefited by correction of the error of refraction, five were cured by tenotomy of the ocular muscles, and one was cured by the use of the pessary. Eight patients continued to suffer more or less severely from migraine, but all continued to wear glasses and said they could not do without them. Baker calls attention to the fact that it is possible for a person with emmetropic eyes to have migraine from eyestrain; consequently, a correction of an error of refraction may not entirely cure a patient of migraine if the patient continues to overwork.

46. **Melanotic Flat Sarcoma of Choroid.**—The case reported by de Schweinitz and Hosmer is interesting from several standpoints. It illustrates the value of transillumination as a diagnostic agent and because flat sarcomas of the choroid are comparatively rare. Noteworthy features of the case were the recurring attacks of neuralgic pain, edema of the lid and localized edema of the bulbar conjunctiva with injection of the overlying superficial vessel. The diagnosis was confirmed microscopically.

Albany Medical Annals.

February.

50 What Shall We Eat? What Shall We Drink? How Shall We Be Saved? G. S. Eveleth, Little Falls, N. Y.
51 *Importance of Intracellular Enzymes in Physiology and Pathology. H. C. Jackson, Albany, N. Y.
52 *Extrauterine Pregnancy. G. S. Towne, Saratoga Springs, N. Y.

51. **Importance of Intracellular Enzymes.**—Jackson presents a very complete review of the character, properties and mode of action of intracellular enzymes. Incidentally, he remarks that it is decidedly questionable whether or not the beneficial results which are so often reported as the result of the so-called enzyme treatment of carcinoma and other conditions are in the relation of cause and effect in connection with the enzyme. He says that scientifically there does not seem to be any reasonable basis for the treatment.

52. **Extrauterine Pregnancy.**—Towne reports two cases of extrauterine pregnancy. The first case was rather a simple one of isthmic tubal pregnancy partially aborted; the second one was a ruptured tubal pregnancy, being almost a tubouterine type. Both cases show the necessity of immediate surgical intervention.

The Laryngoscope, St. Louis.

January.

53 Practical Problems in Otology and Rhinology. D. Grant, London.
54 *Relation of Pathologic Condition of Nose and Accessory Sinuses to Visual Apparatus. J. A. Stucky, Lexington.
55 Mixed Laryngeal Infection. C. E. Munger, Waterbury, Conn.
56 *Lymphosarcoma of Pharynx. O.T. Freer, Chicago.
57 Optic Neuritis in Thrombosis of Cranial Sinuses and Internal Jugular Vein. H. G. Langworthy, Dubuque, Iowa.
58 *Operations on the Ear in Tuberculous Patients. W. G. B. Harland, Philadelphia.
59 Points in the Anatomy of the Temporal Bone to be Considered in Connection with Mastoiditis. J. Hollinger, Chicago.
60 Facial Hypoglossal Anastomosis. J. C. Beck, Chicago.
61 *Traumatic Laryngitis with Eversion of Laryngeal Ventricle. J. H. Abraham, New York.
62 Speculum for Submucous Resection of the Septum. H. P. Mosher, Boston.
63 Simple, Strong Tonsil Snare. H. P. Moseley, New York.

54. **Relation of Nasal and Accessory Sinuses to Eye.**—Stucky claims that not enough attention is given to the treatment of the acute form of nasal accessory suppuration, and that the importance of its early recognition is not fully appreciated. He is convinced that many cases of paresis and paralysis of the extraocular muscles, supposed to be due to rheumatism or to syphilis, are caused by sphenoidal or ethmoidal disease. He has seen one case of ophthalmoplegia externa in which Killian's operation gave complete relief. The symptoms of the eye disturbance vary as much as do the size, shape and position of the sinuses. Stucky urges a closer relationship between the oculist and the rhinologist.

56.—See abstract in THE JOURNAL, Dec. 22, 1906, page 2123.

58. **Operations on Ear in Tuberculous Patients.**—Harland finds that there are three operations that are occasionally called for in tuberculous patients with ear complications: 1, Incision through the drum membrane; 2, removal of granulations and establishment of free drainage from the middle ear in cases with purulent discharge; 3, mastoid operation.

61. **Traumatic Laryngitis.**—Following a very severe pummeling, one blow landing on the right side of the larynx, Abraham's patient complained of dysphagia, melena and epistaxis. He could not talk above a whisper. The mucosa of the larynx was inflamed and infiltrated. Covering and completely obscuring the right vocal cord was an oval tumor, deeply injected, which was diagnosed as an eversion or prolapse of the laryngeal ventricle. Abraham applied ice compresses, put the patient to bed and administered sulphate of magnesia. On the fourth day a 1 per cent. solution of alum was sprayed into the larynx; later this was gradually increased up to 5 per cent. The patient recovered his voice and regained his usual health.

St. Paul Medical Journal.

February.

64 *Two Cases of Endothelial Sarcoma of the Brain; Successful Removals with Subsequent Death. C. E. Riggs, St. Paul.
65 Tent and Porch Living for Consumptive Patients. R. M. Phelps, Rochester, Minn.
66 *Submucous Resection of the Nasal Septum for Correction of Septal Irregularities. W. R. Murray, Minneapolis.
67 Cytotoxins. L. S. B. Robinson, St. Paul, Minn.
68 Uterine Fibroids Complicating Pregnancy. A. MacLaren, St. Paul.

64. **Sarcoma of Brain.**—Riggs claims that in every case of brain tumor radical operation should be done if possible. If this is not advisable, decompressive trephining should be done. He regards cerebral decompression as a definite recognized means of surgical endeavor in every inoperable case. He urges that palliative operations should always be done early and before optic atrophy has occurred. Pain will kill; headache, therefore, may be of such intensity as to demand this procedure. The first patient whose history is given by Riggs died about three months after the operation from what is called a complication of diseases. There was no postmortem. In the second case the growth evidently was of metastatic origin, the primary tumor being situated in the lung. This patient died about six months after the operation, from which considerable benefit had been received.

66. **Submucous Resection.**—Murray refers briefly to all the operations that have been employed for the correction of irregularities of the nasal septum, but expresses himself as favoring submucous resection.

American Practitioner and News, Louisville.

February.

69 Malaria. W. F. Blackford, Louisville.
70 Scalp and Skull Injuries. J. T. Dunn, Louisville.

Journal of the Minnesota State Medical Association, Minneapolis.

February 15.

71 Symptoms and Diagnosis of Gallstones with Report of Cases. C. G. Swenson, Braham, Minn.
72 Mitral Lesions of Endocarditis. G. J. Schottler, Dexter, Minn.
73 The Tuberculosis Problem. W. H. Aurand, Minneapolis, Minn.
74 Retroversion of the Uterus. D. N. Jones, Gaylord, Minn.

March 1.

75 Sidelights from Recent Literature on the Etiology and Pathology of Pneumonia. S. M. White, Minneapolis.
76 Complications of Pneumonia. H. H. Witherstine, Rochester.
77 Symptoms, Diagnosis, Course and Prognosis of Pneumonia. E. H. Bayley, Lake City, Minn.
78 Superficial Lesions Caused by the Diplococcus Pneumoniæ. E. S. Judd, Rochester.
79 Experiences in Obstetrics. C. T. Granger and G. T. Joyce, Rochester.
80 Case of Tetany. L. C. Weeks, Detroit.
81 Rocky Mountain Spotted Fever. W. Chowning, Minneapolis.
82 Case of Strangulated Hernia. C. H. Hunter, Minneapolis.

Vermont Medical Monthly, Burlington.

February 15.

83 *Unusual and Abnormal Conditions of the Appendix. A. P. Heineck, Chicago.
84 Perforative Appendicitis. S. A. Russlow, Randolph, Vt.
85 Treatment of Pneumonia. J. M. French, Milford, Mass.
86 Urinary Diagnosis in Nephritis. G. H. Parmenter, Montpelier.
87 Therapeutics of Quinin. J. P. Newton, Benson.

83.—This article appeared in the Mobile Medical and Surgical Journal, June, 1907.

Detroit Medical Journal.

February.

88 Present Status of Surgery of Prostate. P. Thorndike, Boston.
89 Hyperemia as Treatment for Acute and Chronic Inflammatory Disease. M. Bailin, Detroit.
90 Study of the Infant's Stool. P. Selter, Solingen, Germany.
91 Etiology and Treatment of Pruritus Am. J. A. McVeigh, Detroit.

Medical Sentinel, Portland.

February.

92 President's Address, Portland Academy of Medicine. S. E. Josephi, Portland, Ore.
93 Surgical Anatomy of the Mastoid Antrum. C. W. Shaff, Lewiston.
94 Value of Blood Examination in Surgery. R. I. Newell, Spokane.
95 Diarrhea in Infancy and Early Childhood. A. Hunter, Kendrick, Idaho.
96 Gelseminin. R. J. Smith, Smithfield, Utah.

Kentucky Medical Journal, Bowling Green.

March.

97 *Tuberculosis of the Peritoneum. L. S. McMurtry, Louisville.
98 Protection of the Innocent from Venereal Infection and Prostitution. F. M. Stites, Hopkinsville.
99 *Gonorrhea Up To Date. J. T. Windell, Louisville.
100 Asepsis. W. H. Taulbee, Maysville.
101 Relation Between the Railway Company and the Railway Surgeon. C. H. Vaught, Richmond.
102 Management of the Epileptic State. C. Pope, Louisville.
103 Hyperchlorhydria or Hyperacidity. G. E. Huddle, Bowling Green.
104 Medical Consultations. J. A. Lewis, Georgetown.
105 Observations of European Surgery. O. E. Bloch, Louisville.
106 Treatment of Hepatic Abscess by Aspiration and Siphonage. O. H. Reynolds, Frankfort.

97, 99.—See abstract in THE JOURNAL, Oct. 29, 1906, page 1401.

Medical Fortnightly, St. Louis.

February 25.

107 Critical Analysis of the Expert Testimony in the "Jack the Stabber" Case. D. S. Booth, St. Louis.
108 Systematic Treatment of Syphilis. W. S. Gotthelf, New York.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

February 16.

1 *Objects of Hunter's Life. H. T. Butlin.
2 *Ichthyosis and Its Treatment. W. A. Jamieson.
3 *Treatment of Rodent Ulcer by Zinc Ions. L. Jones.
4 *Secondary Suture of the Great Sciatic Nerve. J. Sherren.
5 *Idiopathic Dilatation of the Rectum and Colon as Far as the Hepatic Flexure. H. M. Fletcher and H. B. Robinson.
6 *Parathyroids and Accessory Thyroids in Man. D. Forsyth.
7 Influence of Increased Barometric Pressure in Man; Saturation of Tissue Fluids with Nitrogen. M. Greenwood.

1. **Objects of Hunter's Life.**—Butlin gives a short sketch of the life of Hunter, taking up particularly the scheme of his life and the means he took to accomplish what he did.

2. **Treatment of Ichthyosis.**—Jamieson lays great stress on the importance of promoting exfoliation of the unduly adherent and effete horny cells in this affection. He recommends the use of resorcin combined with glycerin, in union with starch, which is said to form a bland, persistent, soothing and softening medium with which the resorcin may be combined. He advises using a medicated soap, and a super-fatted one with which resorcin and salicylic acid are incorporated because this prepares the way for the subsequent glycerinization. He has also found the internal administration of cod-liver oil, in small doses, at night, of some service.

3. **Treatment of Rodent Ulcer.**—The method described by Jones can be carried out with an ordinary portable battery. The process is based on the principle of the introduction of zinc ions into the tissues of the ulcer by means of a continuous current. The ulcer is made to assume the appearance of an ordinary simple sore, and in many instances it is healed in a few weeks after a single application. An ordinary medical continuous current battery, with a galvanometer, a pair of wires, a flat pad for completing the circuit at the negative pole, and a rod or other electrode of zinc attached to the positive pole, completes the outfit. The zinc must be covered with three or four layers of lint, which serve as a reservoir to hold the zinc solution, a 2 per cent. solution of the sulphate being very suitable. The zinc should be freshly cleaned or amalgamated, and the solution should be made with distilled water. It is as well not to touch the zinc electrode or its covers with the fingers unnecessarily, because every touch imparts a trace of sodium chlorid from the skin, and tends to reduce the efficiency of the process a little by bringing in some foreign ions. The circuit is completed through the usual pad electrode applied to any convenient part of the patient, the zinc electrode of suitable size is held on the rodent ulcer, and the current is slowly turned on until a current of 5, or 8, or 10 milliamperes is reached, according to the size of the electrode used.

4. **Secondary Suture of Sciatic Nerve.**—Sherren reports a case of complete division of the great and small sciatic nerves at the lower part of the sciatic plexus, the result of a bullet wound. He sutured the distal end of the great sciatic to the central end of the lumbosacral cord and second sacral nerve, enclosing the junction in a decalcified bone tube. The peripheral end of the small sciatic he sutured into a small transverse cut in the great sciatic below the point of union to the lumbosacral cord and second sacral nerves. Six weeks after the operation a prick was appreciated over nearly the whole of the small sciatic area, and a week later sensation was restored over the whole of this area. The operation was done six months after the accident occurred. Six months after the operation deep touch was appreciated and well localized over all the affected area, sensibility to prick has been restored to the leg, but the foot remains insensitive to this stimulant.

5. **Idiopathic Dilatation of Rectum and Colon.**—The patient, whose history is given by Fletcher and Robinson, was a boy 12 years of age. Except for the large size of the abdomen and a tendency to constipation, nothing was noticed by the boy's parents until about two weeks before his admission to the hospital. The rapid wasting with great abdominal distension, accompanied by vomiting and obstinate constipation, suggested an acute condition and closely simulated tuberculous peritonitis. An operation was decided on. A mid-line incision was made below the umbilicus and a large tense bluish-colored tumor presented, with very large distended veins coursing over it, and with a lace-like pattern on its surface, due to the hypertrophied and separated muscular bundles. The bladder was attached to the lower part in front. The swelling was proved to be free at the sides and in front, and to extend upward in the middle line to the ensiform cartilage. To explore this further the incision had to be extended considerably upward, and the tumor was brought out of the belly. The following was found to be the condition of things: The mid-line swelling started from the pelvic floor and expanded immediately like the body of a flask; above the navel it began to narrow into the neck of the flask, but yet its circumference was as large as a man's arm. Just below the ensiform cartilage there was a somewhat acute bend to the left, and the gut, with almost the same caliber, went straight down into the left iliac fossa, formed a loop, and became continuous with the descending colon. Further exploration showed that the dilatation continued along the descending and transverse colon, with very little diminution in size until the hepatic flexure was reached. The ascending colon was only slightly enlarged, and filled with some hard fecal lumps, and the cecum and appendix were normal. The colon beyond the hepatic flexure contained many pounds of soft, dark fecal material, which was squeezed out through the rectum by gradual pressure on the gut from within, with dilatation of the anal canal by the assistant's finger. It was remarked at the operation when this had been evacuated that the hypertrophy of the bowel wall was so great as to feel "as thick as the sole of a boot." The finger, after passing through the internal sphincter, entered an enormously dilated cavity whose walls were touched with difficulty. No hard or enlarged glands were felt in the mesentery; there were no signs of peritonitis nor any abnormal band. The rectum before emptying was measured with an aseptic silk ligature at its greatest circumference from mesentery to mesentery, and proved to be 19¾ inches. The abdominal wall was closed in layers. The boy remained well for about nine months, when he began to complain of abdominal pain which rapidly became worse, but was relieved by ginger brandy. Diarrhea followed, the boy became comatose and died in coma 24 hours after the onset of the abdominal pain. At the postmortem the rectum and colon were found enormously distended. The authors suggest that the terminal enteritis may have been due to the ingestion of some toxic substance.

6. **Importance of Parathyroids.**—Forsyth has examined the parathyroids in about 60 human beings, and in over 70 different species of animals. As the result of these studies he concludes that the relationship between the parathyroids and

V 4
190

age, between the parathyroids and accessory thyroids, and between accessory thyroids and age is so clear as to be strong evidence against admitting for the parathyroids the physiologic value attached to them by many experimenters.

The Lancet, London.

February 16.

8 *Leucoderma and Analogous Changes in the Pigmentation of the Skin. W. H. Evans.
9 *Injury and Deformity of the Epiphysis of the Head of Femur: Coxa Vara. R. C. Elmslie.
10 *Some Affections of Pancreas. S. Phillips.
11 *Large Vesical Calculus Successfully Removed by Suprapubic Operation. H. Littlewood.
12 *Cancer of the Esophagus. E. Pratt.
13 Value of Bacteriologic Examination of Blood in Typhoid and Other Bacteriemias. F. G. Bushnell.

8. Leucoderma and Pigmentation of Skin.—Evans holds that in no way does the nervous system have any act or part in the production or the localization of the patches of leucoderma; that the disease is in all probability due to the action of some toxin, derived from the alimentary canal, assisted by local injury and the action of light; and that the mechanism by which this is carried out is the vital action of peripatetic cells.

9. Coxa Vara.—Elmslie discusses the clinical history of this affection very fully, taking up in the order mentioned its history, clinical varieties, pathology and treatment.

10. Affections of Pancreas.—Phillips discusses six cases of chronic interstitial pancreatitis and 20 cases of carcinoma of the pancreas which have come under his observation. The paper is to be continued.

11. Vesical Calculus.—Littlewood removed a calculus weighing 18 ounces and 5 drams from the bladder of a man aged 47, who stated that a diagnosis of his condition was made when he was 15 years of age. Operation was refused at that time. Since then he has had constant urinary trouble, frequent and painful urination, and has many times passed blood. After the age of 32 the symptoms became so aggravated that an operation had to be done.

12. Cancer of Esophagus.—The case reported by Pratt was one of primary tumor of the esophagus, situated just above the diaphragm, with secondary tumors of the liver.

Journal of Obstetrics and Gynecology of the British Empire, London.

February.

14 *Chronic Septic Infection of the Uterus and Its Appendages. A. Donald.
15 *Pathology of Chronic Metritis. W. F. Shaw.
16 Intractable Uterine Hemorrhage and Arteriosclerosis of Uterine Vessels. E. H. B. Macdonald.
17 Case of Vesical Calculi Due to Perforation of Bladder by Suppurating Dermoid Tumor of Ovary. J. A. C. Kynoch.

14. Chronic Septic Infection of Uterus and Appendages.—Donald gives a comprehensive account of the progress and results of certain inflammatory processes as they infect the uterus, tubes and ovaries.

15. Pathology of Chronic Metritis.—Shaw gives the results of the microscopic examination of 38 uteri extirpated for chronic metritis alone, and of 7 extirpated for chronic metritis with some other concurrent disease. In three cases there was carcinoma of the cervix, in two intramural fibroids, in one a tubo-ovarian abscess, and in one double ovarian disease. For comparison he also examined 23 normal uteri from patients of various ages and the endometrium removed by curetting in 50 cases of endometritis. He found that the hemorrhage of chronic metritis does not depend on changes in the vessel walls of the mesometrium. In 21 instances the vessels were not increased in number nor were any changes observed in the vessel wall, but in the histories of these 21 hemorrhage was of quite as frequent occurrence as in the other 17. Endometritis was present in each of the 38 cases. The changes in the connective and muscular tissues were also studied carefully and are reported on at length. Shaw concludes that chronic metritis is a simple hypertrophy of the mesometrium and is not a connective tissue hyperplasia.

Glasgow Medical Journal.

February.

18 Need of Progressive Study of Industrial Diseases. J. W. Allan.
19 *Treatment of Conjunctivitis. A. F. Fergus.
20 Plea for Study of the Deaf Child and for Teaching of Speech to the Semi-deaf and Semi-mute (con.) J. K. Love.
21 *Treatment of Neurasthenia. W. F. Somerville.
22 *Case in which the Radical Mastoid Operation was Performed for Purulent Otitis Media. J. G. Connal.
23 Throat Department of Glasgow Royal Infirmary. J. Macintyre.

19. Treatment of Conjunctivitis.—Fergus compares the modes of treatment of conjunctivitis in vogue 25 years ago with those now employed.

21. Treatment of Neurasthenia.—Somerville advises rest in bed for several weeks, with judicious feeding, massage, passive movements and then resistance exercises and the high-frequency current in the treatment of neurasthenia. On the whole, his treatment does not differ from that employed by others.

22. Radical Mastoid Operation.—When seen for the first time Connal's patient, a boy 12 years of age, had a primary diphtheria of the external auditory canal. The diagnosis was confirmed microscopically. On account of subfebrile temperature and a slightly fetid purulent discharge from the ear a radical mastoid operation was done. After the operation there was a persistent elevation of temperature, associated with pain in the joints which yielded to administration of sodium salicylate.

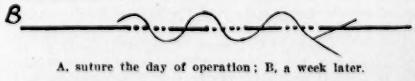
Revue de Chirurgie, Paris.

Last indexed, XLVII, page 1188.

24 (XXVI, No. 11, pp. 607-784.) Frequency of Bony Prominence Above Internal Condyle. (Apophyse sus-epitrochléenne.) C. Féré.
25 *Congenital Talipes Varus. (Pied varus cong.) De Vlaccos.
26 *Radical Treatment of Inguinal Hernia. (Hernies inguinales.) L. Gratschoff. Commenced in No. 10.
27 (No. 12, pp. 785-948.) *Evacuation of the Parotid Cavity by Resection of the End of the Jaw. (Evidement de la loge parotidienne.) L. Bérard and R. Leriche.
28 Nature and Origin of Cysts in the Bones, Especially Simple Cysts of the Long Bones. (Kystes des os.) E. Kummer.
29 Treatment of Arteriovenous Aneurism. (Anévrisme art.-vein.) D. J. Cranwell.
30 *Removal of Vas Deferens and Seminal Vesicle in Genital Tuberculosis. (Vaso-vésiculectomie.) R. Baudet and L. Kendirdjy. Commenced in No. 9.
31 *Operative Indications in Old Traumatisms of the Skull. (Traum. anciens du crâne.) L. Tixier. Commenced in No. 11.

25. Congenital Talipes Varus.—De Vlaccos ascribes this condition to deficient amniotic fluid, and relates the details of three cases which sustain this view. In treatment, the position of the knee and hip joints must be regulated, and if a cast is applied, it must include part of the pelvis. If the abductors are much contracted, he advises tenotomy at once, instead of wasting time on orthopedic measures.

26. Radical Treatment of Inguinal Hernia.—Gratschoff's method has already been described in THE JOURNAL, on page 758 of vol. xlvi, 1906. Special advantages are claimed for his method of suture which does not bind the tissues at any point. The stitches are taken with a single thread of strong silk. The ends of the thread are fastened to an elastic steel bow above the skin. The tension of the bow tends to straighten out the thread so that by the end of eight days the thread is in a single straight line, while the tissues have yielded and the former straight incision is now a wavy line. The steel bow



A, suture the day of operation; B, a week later.

is about 13 cm. (5 or 6 in.) long, with a perforated bulging tip at each end. Two small hooks and a catch to hold the thread are soldered on the convex side, and to these the thread is fastened. With a curved needle the thread is then passed through the skin 1 or 2 cm. from the inner end of the incision, then through the internal pillar of the ring and the external pillar, through the internal pillar a second time, and so on until the necessary number of stitches have been taken, when the thread is brought out through the skin about 1 cm.

from the outer end of the incision. As a rule, two stitches for each pillar are sufficient. The thread is then drawn taut and fastened to the curved bow. At the end of eight days the bow and suture are removed. He says that with this technic the radical operation is completed in ten minutes, including the anesthesia. The danger from the anesthesia and from infection are comparatively slight, and he declares that there is no danger of embolism. In case of recurrence the simple operation can be done again without fear. This technic is contraindicated only in cases with a defective posterior wall in the inguinal canal.

27. **Evacuation of the Parotid Cavity.**—Bérard and Leriche had occasion to remove a large tumor which had recurred in the parotid region and also two other malignant tumors at the same point in other cases. Instead of blind groping in the parts, they evolved a technic for systematic access to the region by resection of the entire end of the jaw, including the posterior condyle. After perfecting the technic on the cadaver they followed it in two more recent cases, with eminently satisfactory results, as they relate in detail with illustration.

30. **Extirpation of Vas and Seminal Vesicle in Case of Tuberculosis of the Genital Organs.**—Baudet and Kendirdjy discuss the indications and contraindications for this operation. Among the latter are concomitant cystitis or advanced lesions in the lungs. Bad general condition is not a contraindication if it is presumably the result of the genital tuberculosis, and the age need not be taken into consideration. The operation has been done on a child of 3 and on a man of 62. It is indicated in case of a urinary fistula due to the tuberculous affection of the seminal vesicle; in case of rectal obstruction or urinary disturbances not due to cystitis; when the seminal vesicles are much enlarged or continue to increase in size after subsidence of the epididymitis under treatment, and also when manifest lesions exist along the vas deferens. Under other conditions the operation is regarded as too serious to compensate for the possible gain. Forty-seven cases are reviewed and summarized, the list including a number of unpublished cases. The perineal route was followed in 30, Young's method in 3, the inguinal route in 6, the Kraske or sacral route in 2, and the parasacral in 5. Four of the case histories are from Baudet's own experience and 8 from Roux's.

31. **Operative Treatment of Old Traumatic Lesions of the Skull.**—Tixier concludes from his study of this subject that too little attention has been paid in the past to the cerebrospinal fluid in the pathogenesis of symptoms from traumatism, recent or remote. He also emphasizes the necessity for investigating the past history for an accident to the skull in all cases of brain trouble. He declares that Jacksonian epilepsy should be regarded in the same light as a motor or sensory cortical paralysis, in connection with localization of the symptoms. Besides this form, generalized epilepsy may be observed as a sequel to an accident to the skull in individuals free from any nervous taint, and benefit is liable to follow trephining in such cases. Young children display a great tendency to diffuse symptoms consecutive to circumscribed localized traumatism affecting the skull. Even general epileptic seizures in adults are not rare as the consequence of a traumatism affecting regions other than the Rolandic area. Headache may resist all palliative measures, and by its intensity may demand surgical intervention. Such symptoms as contractures, signs of organic decay, coma and the like, although usually regarded as grave and incurable, are likely to retrogress under appropriate surgical treatment of the cranial lesion. In short, Tixier does not recognize a single absolute contraindication to surgical treatment, saying that it is never too late to operate and trephining offers the only chance of recovery for patients who have exhausted all the resources of medical therapeutics. Lumbar puncture is the only means of determining quantitative or qualitative modification of the cerebrospinal fluid. Undue pressure from this fluid is responsible for many of the symptoms of trauma affecting the skull. A chronic lesion left from some old injury may induce a reaction on the part of the meninges whose existence is revealed by the presence of lymphocytes in the centrifugated sediment. This reaction may be observed long after the acute stage is past. Lumbar puncture also relieves undue tension of the cerebrospinal fluid and thus banishes the symptoms from this cause. Headache, vertigo, edema of the papilla, epileptiform seizures and the like are sometimes favorably influenced by withdrawal of the excess of cerebrospinal fluid, but the results are liable not to be permanent, as the same cause that produced the hypertension in the first place induces it again. In operating for an old trauma of the skull, trephining is more or less an exploratory operation, and the opening should be made large. In case the cortex presents a normal appearance, before proceeding to more radical measures, it is wise to wait a while to see if the mere trephining will not relieve without further intervention. He advises meningo-periosteal suture to prevent trouble later from adhesion between the dura and cortex. The results have been much better with definite resection of the bone than with temporary resections. In case of recurrence or of complete or relative failure, he advises not to hesitate to operate again. It frequently happens that at the first operation the lesion was overlooked or the lesions found were supposed to be responsible for all the trouble. A series of operations may thus be extremely important; reports of patients cured after a third operation are not exceptional in medical literature.

Revue de Gynécologie, Paris.

Last indexed, XLVII, page 1333.

32 (X, No. 5, pp. 771-960.) *Technic of Gynecologic Laparotomy. (Soins pré-opératoires; détails de technique opératoire.) L. Dartigues.

33 *Isolated Flaps of Peritoneum for Patching the Viscera. (Greffes péritonéales.) L. Loewy.

34 *Introduction of Medicinal Substances into the Uterine Mucosa by Electricity. (Introduction d'ions en gynécologie.) A. Zimmern.

35 *Pregnancy in a Cornu of the Uterus. (La grossesse angulaire.) P. Lequeux.

36 *Tuberculosis of the Vulva. (Tub. de la vulve.) X. Bender.

37 (No. 6, pp. 963-1152.) Torsion of Hematosalpinx Complicating Congenital Atresia of the Vagina. (Torsion des hématosalpinx, etc.) M. Chaput.

38 *Reciprocal Relations Between Epitheliomata of Uterus and Ovary. (Epithéliomas de l'ut. et de l'ovaire.) Albertin and A. Jambon.

39 *Tuberculosis in Hernias. (Tub. herniaire et vagino-péritonéale.) G. Cotte.

40 *Acute Hemorrhagic Pancreatitis with Diffuse Fat Necrosis. (Pancréatite algue hém.) C. Lenormant and P. Lecène.

32. **Laparotomies in Gynecology.**—Dartigues reviews his experiences with 1,000 laparotomies at Pozzi's clinic, and describes the preferred technic and preparation, with 37 illustrations. Among the points emphasized is the advisability of refraining from saline injection or infusion during the first few hours after a laparotomy, as otherwise the oozing is much more profuse and the tendency to hemorrhage is augmented by the increased volume of the blood, distending the blood vessels and threatening rupture or tearing out of the sutures. By waiting a few hours before making the injection, the danger of hemorrhage, he states, is much reduced.

33. **Grafts of Peritoneum.**—Loewy gives an illustrated description of the process of healing when an isolated flap of the peritoneum has been used to cover or patch a defect in a viscus. By using an isolated flap there is no danger of a persisting and vascular band between it and the rest of the peritoneum, while at the same time the flap heals in place and becomes an integral part of the surface on which it is implanted, according to experiments on animals. He further describes 4 cases in which the method was successfully applied in the clinic. In 2 cases the "Loewyte," as the transplanted flap is called, was used to cover a defect in the uterus, in another two flaps were used on the liver after removal of a hydatid cyst. In another case, removal of an ovarian cyst left a defect which was covered with a flap of omentum held in place with four stitches. In other cases the defect was packed with the flap of omentum or the flap was applied after surpravaginal hysterectomy, or to the tube after removing an adherent loop of intestine.

34. **Ions in Gynecology.**—Zimmern relates favorable experiences at Pozzi's clinic with drugs introduced into the uterine mucosa by means of electrolysis.

35. **Pregnancy in the Uterine Cornua.**—Lequeux concludes his study of this subject with the remark that rupture is rare

in this condition, which is half way between normal and tubal pregnancy. Expectant treatment is the principle to be followed, but when the diagnosis is uncertain, there should be redoubled caution. There are occasionally pains and hemorrhage during the first four months. The lateral location of the tumor, without tendency to slide down toward the pouch of Douglas, and the finding of the round ligament entirely outside the hypertrophied mass, are the signs that differentiate an "angular" from an ectopic pregnancy.

36. **Tuberculosis of the Vulva.**—Bender has encountered 2 new cases of tuberculosis of the vulva and has collected others on record, bringing the total to 48. Besides the classic ulcerative form, there is another variety with merely hypertrophy, edema, and an aspect suggesting elephantiasis. Traumatism was noted in a number of cases, and transmission from the male was evident in others. Sometimes the lesions recur again and again after extirpation and energetic treatment; in other cases a complete cure is realized. In some cases the course of the affection is extremely slow; from 7 to 17 years in some instances. Treatment should be by extensive removal into sound tissue, with immediate suture, he says, except in presence of extensive tuberculous lesions elsewhere. Multiple fistulas should be slit over a grooved sound and thermocauterized.

38. **Concomitant Epitheliomata of Uterus and Ovary.**—Albertin and Jambon describe 2 cases of simultaneous cancer in uterus and ovary. In one case the uterine tumor was primary and in the other the ovarian. They affirm that malignant disease of the ovary requires ablation of the uterus and the adnexa of the other side, and, likewise, that hysterectomy for malignant disease should invariably be accompanied by bilateral oöphorectomy. The nervous disturbances that may follow are less to be feared, they declare, than ovarian or uterine metastasis.

39. **Tuberculosis in a Hernia.**—Five cases of tuberculous processes in a hernia are reported, accompanied by vaginoperitoneal complications. One patient was a child of 7; the others were men between 16 and 33. The lesions were apparently primary in all, and were treated by resection. Other cases that have been published are summarized, a total of 136.

40. **Acute Hemorrhagic Pancreatitis.**—Lenormant and Leène had occasion to operate on a young man presenting suddenly symptoms of severe, acute ileus and peritonitis of unknown cause. Nothing abnormal was found at the laparotomy except small white spots, like drops of candle grease, noticed at certain parts of the great omentum. The appendix, stomach and intestines were normal, and the abdomen was sutured without further enlightenment, but the postmortem findings thirty-six hours later revealed inoperable hemorrhagic pancreatitis with diffuse fat necrosis, on a basis of an old chronic, mild interstitial pancreatitis. The particulars of 36 similar cases from the literature are added. Six of the otherwise doomed patients were saved by a prompt operation. This allows the pancreatic secretions a way of escape through the drain. It is their retention, the authors state, that sets up the fat necrosis and other mischief. In Porter's case the pancreatic affection recurred a year later, and an operation was again undertaken, with successful outcome. This time the trouble was a fluctuating focus in the head of the pancreas.

Beiträge z. Klinik der Tuberkulose, Würzburg.

Last indexed, XLVII, page 1089.

41 (VI, No. 3, pp. 228-326.) *Tuberculosis in Early Childhood. (Tub. im frühen Kindesalter.) A. Schlossmann.
42 *The Neutrophile Leucocytes in Specific Treatment of Chronic Pulmonary Tuberculosis. (Alt-Tuberkulin, Neu-Tuberkulin Koch, Tuberculinum Denys und Hetol.) Uhl.
43 Case of Regular Premenstrual Hemoptysis in Tuberculosis. (Prämenstruellen Lungenblutungen.) A. Scherer.
44 *Tuberculosis of the Esophagus. (Tub. des Oesoph.) H. v. Schrötter.
45 Relations Between Hemoptysis and Fibrin Casts in Sputa. (Beziehung zwischen Hämoptoe und Fibringerinnsel im Auswurf.) J. Port.
46 (No 4, pp. 327-431.) *Collateral Tuberculous Inflammation. (Kollaterale tub. Entzündung.) N. P. Tendeloo.
47 Tuberculin Diagnosis of Pulmonary Tuberculosis. (Zur Tub.-Diagnostik der Lungentub.) F. Junker.
48 Alcohol and Tuberculosis. (Schlusswort.) Wolff.
49 Experimental Study of Action of Old Tuberculin. (Wirkungen des Alttuberkulins.) G. Schröder.

41. **Tuberculosis in Early Childhood.**—This article is the address prepared by Schlossmann for the Fifth International Tuberculosis Conference recently held at The Hague. He regards Behring's act in calling attention to the connection between infection in infancy and the development of tuberculosis in later years, as the most important progress in the campaign against tuberculosis since the discovery of the tubercle bacillus. Careful study of the records and wide personal experience have convinced Schlossmann that the death rate from tuberculosis in infancy is much higher than indicated by the official reports. He regards 6.8 per cent. as the general average death rate from tuberculosis during the first year of life. He accepts it as established that a primary tuberculous affection of the lungs and bronchial glands can originate from the intestinal tract, and that infection by way of inhalation is of much less frequent occurrence. He is also convinced that tuberculosis in the overwhelming majority of cases is a "child's disease." Persons who escape it during childhood seldom develop it later. This assumption explains among other things the larger proportion of cases of tuberculosis among the poor. The children of the well-to-do are better protected during childhood, while in later life the conditions are more even in the two classes. Prevention of tuberculosis among children is a problem that can be solved with comparatively little effort and expense. If only a tenth of the sums spent hitherto in combating tuberculosis among adults were diverted to prophylaxis of the disease among children, inestimable good might result. The rearing of human beings free from tuberculosis is a much easier task, he asserts, than the attempt to cure the already existing disease.

42. **Influence of Tuberculin Treatment on the Neutrophile Leucocytes.**—On page 494 of vol. xlii, 1904, THE JOURNAL published a summary of Arneth's views in regard to the importance of the modifications in the neutrophile leucocytes as an index of the course of infectious diseases. Uhl has been applying Arneth's method as a means of tracing the progress of tuberculous processes under specific treatment at the Edmundsthal sanatorium. No improvement in the blood picture was obtained with cinnamic acid, but the blood picture improved constantly under the influence of tuberculin treatment, with very few exceptions. Even very small doses were followed by unmistakable improvement.

44. **Tuberculosis of the Esophagus.**—In the 2 cases reported by von Schrötter the right lung was primarily affected and the corresponding part of the esophagus became involved. He was able to inspect the lesion directly with the esophagoscope, the first time, he says, that this has been done in the clinic. He believes that a large focus elsewhere is a prerequisite for a tuberculous lesion in the esophagus, with adhesion of the wall.

46. **Collateral Tuberculous Inflammation.**—Tendeloo remarks that many tuberculous foci in the lungs first manifest their presence by collateral inflammation, as in the case of hydrops of the knee and in many cases of apparently primary tuberculous pleurisy. The orginal focus may be so small that it is overlooked even at autopsy. He presents further evidence to prove that the tubercle bacillus and its toxins are liable to induce collateral inflammation near or at a distance, and also that such inflammation is liable to retrogress completely or to subside into cheesy degeneration and connective tissue organization.

Berliner klinische Wochenschrift.

50 (XLIV, No. 3, pp. 65-92.) "Ascending" Tuberculosis of Female Genital Tract. (Ascend. Tub. im weiblichen Genitaltrakt.) P. v. Baumgarten.
51 Subglottic Laryngoscopy. (Subglottische Laryngoskopie.) M. Senator.
52 The "Silver Spirochetes." (Zur Kritik der Silberspirochæte.) E. Glerke.
53 Study of the Production of Mucus in the Stomach. (Schleimabsonderung im Magen.) M. Pewsner. Commenced in No. 2.
54 The Breathing Test. (Atemprobe.) H. Marx.
55 (No. 4, pp. 93-124.) Catalytic Influencing of Autolysis of the Liver by Colloidal Metals. (Beeinflüssung der Leberautolyse durch kolloidale Metalle.) M. Ascoli and G. Izar.
56 Importance of the Albuminoid Precipitated by Acetic Acid in Children's Urine. (Bedeutung des durch Essigsäure fällbaren Eiweisskörpers im Harn der Kinder.) L. Langstein

57 Which Elements of the Inflamed Tissues Simulate "Silver Spirochetes," (Welche Gewebsbestandeile, etc.) H. Friedenthal.
58 Reliability for Diagnosis and Specificity of the Complement-Binding Method in Typhoid and Paratyphoid. (Komplementbindungsmethode.) J. Keuchs.
59 Study of Fever. (Einiges über das Fieber.) H. Beitzke.

Deutsche medizinische Wochenschrift, Berlin and Leipsic.

60 (XXXIII, No. 4, pp. 129-168.) *Treatment of Endocarditis. (Endocarditis.) G. Hoppe-Seyler. Clinical lecture.
61 *Action of Arsenic on Trypanosomes and Spirochetes. (Wirkung des Atoxyls auf Trypanosomen und Spirochäten.) Uhlenhuth, Gross and Bickel.
62 *Excessive Secretion of Gastric Juice During Digestion. (Ueber digestiven Magensaftfluss.) I. Boas.
63 *Change in Chemistry of Stomach After Gastroenterostomy and the Influence of this Operation on Ulcer and Carcinoma of the Stomach. (Aenderung des Magenchemismus.) M. Katzenstein. Commenced in No. 3.
64 *Technic of Intravenous Therapy. (Zur Methodik der intravenösen Therapie.) H. Strauss.
65 Voluntary Dilatation of the Pupil. (Willkürliche Erweiterung der Pupillen.) M. Reichardt.
66 New Remedies, Specialties and "Patent Medicines." (Neue Arzneimittel, etc.) F. Zernik.
67 Vegetable Diet as the Diet for the Masses and in Therapeutics (Vegetarische Diät als Volksernährung und als Heilmittel.) W. Ebstein.
68 *Professional Secrecy. (Zur ärztlichen Schweigepflicht.) E. Landsberg.

60. Treatment of Endocarditis.—Hoppe-Seyler declares that the treatment of endocarditis consists in absolute quiet, after the causal trouble has been discovered and corrected so far as possible. Suppurative otitis media, follicular tonsillitis, chronic appendicitis, abscess in the prostate, adnexitis, gonorrhea or a pneumococcus affection may be the underlying cause, ignored in some instances. He relates the case of a girl with repeatedly recurring endocarditis with high fever, infarcts in the lungs, anemia, emaciation, etc., who was supposed to be tuberculous, but who was promptly cured of all these symptoms and restored to apparent health by removal of the tonsils on account of recurring tonsillitis. In case of articular rheumatism with endocarditis, sodium salicylate should be pushed to 4 or 6 gm. (60 to 90 grains) a day for adults, unless symptoms of very severe intoxication develop. Co-existing nephritis is no contraindication, as the nephritis is a consequence of the rheumatism, and energetic treatment of the latter cures both. In case of a septico-pyemic affection, besides the local measures, he has obtained good results with quinin, giving 0.3 or 0.5 gm. quinin hydrochlorate several times a day to act on the bacteria in the blood. It may have to be kept up for weeks, adding iron in case of anemia. This treatment acts on the deposits of bacteria in the endocardium, but it acts very slowly, so that the lack of evidences of improvement in the first few weeks should not deter from continuing the treatment. If not tolerated by the mouth, the quinin can be given by the rectum or, possibly, subcutaneously. The most dangerous form of endocarditis is that induced by pneumococci, and hence, the use of the antipneumococcus serum seems rational, although it is not certain in its effects, according to the reports to date. Other curative sera sometimes benefit and sometimes do not. The physician's examination must be as little disturbing as possible. An exacerbation has frequently followed too prolonged percussion, auscultation, etc. Visits, talking, listening, bright light, noises and strong odors must be kept away from the patient.

In case of pain in the heart region a few leeches or a wet cup applied to the interspaces are useful, or a light ice bag or coil of light rubber tubing through which cold water is passed. Light, nourishing diet, nothing hot or cold, slightly acidulated water to drink, and heart tonics should be the main reliance, with scrupulous avoidance of abrupt movements likely to induce embolism. In the chronic form, so long as the heart shows much incompetency, the patient should stay in bed. The urine should be repeatedly examined for albuminuria, as nephritis is liable to develop suddenly without signs of its existence except from the lack of effect from the heart tonics. Diaphoretics, especially pilocarpin, should be avoided, as also moist heat, light and steam baths. Vegetable laxatives are useful, but calomel, he states, should be avoided on account of its liability to induce irritation in the kidneys, as also sulphate of magnesia and soda sulphate and mineral waters containing them. If the latter are absorbed and eliminated through the kidneys they may irritate them still further. Symptoms of valvular trouble require rest and regulation of the heart action; local application of cold is useful here, and possibly also the bromids, valerian, and, in case of angina pectoris, nitroglycerin, etc. A mild and yet effectual means of regulating and stimulating the heart action, especially with anemic patients, is administration of pills of camphor and reduced iron, each 6 gm. (about 90 grains), in 90 pills, from 3 to 6 daily for weeks. Wet packs to the chest are not well tolerated, and warm or cold baths before retiring are rather exciting than otherwise in case of heart trouble. In the after-treatment he warns that the patients must keep very quiet on hot, damp days, and that all sports are dangerous, including bicycling. The sensation of fatigue is not experienced with sports until the stage of exhaustion has been reached, while with walking, mountain climbing, Swedish exercises, etc., fatigue is an early sign. He relates an instance of the loosening of an infectious thrombus in the arm or leg in the course of horseback riding, leading to a fatal exacerbation of the long past endocarditis. Tepid sea-water baths are excellent, but sea bathing must be avoided.

61. Action of Arsenic on Trypanosomes and Spirochetes.—Encouraged by Koch's reported success with arsenic in sleeping sickness, systematic experimental research with it in other trypanosome and spirochete affections is being conducted at Berlin. The results to date have been rather favorable, so that a trial of arsenic is urgently recommended in trypanosome affections in horses and those due to spirochetes in fowls, and possibly in syphilis.

62. Excessive Secretion of Gastric Juice During Digestion.—Besides the continuous excessive secretion of Reichmann's disease and the paroxysmal hypersecretion accompanying certain nervous affections and undoubtedly due to nervous influences, there is a third form of excessive secretion occurring only during the process of digestion. Boas has had occasion to observe this latter form in 12 patients, all men. The most prominent symptom was the emaciation, the patients losing 20 or 30 pounds in a comparatively short time, probably from the waste of so much gastric juice. Its effect on the intestines is to induce extreme constipation. The subjective symptoms are similar to those of chronic nervous dyspepsia, while the splashing sound is of frequent occurrence. Its presence under these conditions, he adds, is a warning to be very cautious in basing deductions on it in practice. The resemblance of the clinical picture to that of nervous dyspepsia and atony of the stomach has convinced him that many cases diagnosed in the past as nervous dyspepsia or atony of the stomach, were in reality cases of this digestive hypersecretion. The anomaly is best diagnosed by examining the stomach content fasting, again after a test breakfast without fluids, and again after another test meal. Treatment should aim to bring the weight up to normal, to avoid substances liable to stimulate the gastric secretion, and to promote the digestion of starch, which seems to suffer most from the condition. These indications are met by a diet of albumin, fat, sugar or dextrin, and white bread crust, alkaline beverages at meals and systematic treatment with alkalies, preferably a teaspoonful of sodium citrate four times a day. One of his patients thus took nearly three pounds of sodium citrate in the course of three months with constant benefit and final restoration to normal. He asserts that he has never witnessed any untoward results from prolonged administration of the vegetable alkalies, given alone or with a little magnesia.

63. Remote Effects of Gastroenterostomy in Ulcer or Cancer of the Stomach.—Katzenstein has been conducting research on dogs and comparing the results with clinical experiences, and has found that bile and pancreatic juice always find their way into the stomach after a gastroenterostomy. This occurs at first continuously and later only after ingestion of food. Their appearance in the stomach is hastened by the presence of fat in the food. In consequence of this admixture of alkaline intestinal juices, the stomach acidity is reduced by a chemical reaction and also by reflex inhibition. Pepsin is rendered inactive by even a transient alkaline reaction, but Katzenstein states that trypsin is not much affected by a transient acid

reaction. The hydrochloric acid-pepsin digestion is thus much impaired by a gastroenterostomy. One of the practical results of this research is the explanation of the benefit from gastroenterostomy in case of cancer of the stomach. Improved motor conditions are not the only factor; still more important, probably, is the action of the pancreatic juice on the surface of the cancer which, he asserts, it presumably digests and thus checks the growth of the cancer. The operation is consequently indicated in case of inoperable cancer of the stomach not only in the pyloric region, but also elsewhere. Another point to which he directs attention is the prompt healing of an ulcer when the secretion of hydrochloric acid can be checked completely. This can be accomplished by food rich in fats, frequent meals and large amounts of fluids; water by reflex action induces an increased secretion of bile and pancreatic juice and an increased outflow of these juices into the stomach.

64. **Technic for Intravenous Injection.**—Strauss gives an illustrated description of his technic for intravenous injection of strophanthus or digitalis in serious acute cardiac incompetency, or for the few other indications for intravenous medication, of which he recognizes only acute sepsis or pyemia and acute articular rheumatism refractory to the salicylates. He makes the injection extremely slowly, choosing the most prominent vein, the farthest from the artery, after application of a tourniquet above.

68. **Professional Secrecy from a Lawyer's Standpoint.**—Landsberg, professor in the law department at Bonn, here discusses various legal aspects of professional secrecy in case of proceedings in the criminal and civil courts. In conclusion, he remarks that physicians are apt to overestimate the dangers for them of failure to respect the principle of professional secrecy. The persons liable to claim damages from them in case they have failed to maintain professional secrecy are, as a rule, those whose earning capacity or position depends on the public's ignorance of their diseased condition. The nurse who persists in retaining her position although she knows that she is endangering the health of the child in her charge, the phthisical dairy superintendent who keeps up his work although amply warned by the physician as to the danger of infection of the community—persons of this category earn their money under false pretenses, as it were, and it is simple equity, Landsberg asserts, that damages can not be claimed for loss of a position held only under false pretenses. He cites Roman law and more recent German jurisprudence to establish this point, adding that this principle of equity will remain as long as there is any law, and physicians can rely confidently on it.

Münchener medizinische Wochenschrift.

69 (LIV, No. 5, pp. 153-200.) Incarceration of Three Appendices Epiploicæ in Hernia. (Brucheinklemmung von App. epipl.) H. Mohr.
70 *Influencing of Heart Action and Blood Pressure by Pressure on Painful Points. (Beeinflussung der Herztätigkeit und des Blutdrucks von schmerzhaften Druckpunkten aus.) Rumpf.
71 *First Thousand Childbirths under Scopolamin-Morphin. (1,000 Geburten im Skopolamin-Dämmerschlaf.) C. J. Gauss.
72 *Scopolamin-Morphin in Obstetrics. (Skop.-Morph. in der Geburtshilfe.) Preller.
73 *Technic of Spinal Anesthesia under Scopolamin-Morphin for Abdominal and Gynecologic Operations. (Lumbalanästhesie im Skop.-Morph. Dämmerschlaf.) Penkert.
74 *Operative Treatment of Menacing, Profuse Gastric Hemorrhage. (Op. Therapie bei lebensgefährliche profusen Blutungen.) G. Hirschel.
75 *Preparation for Operations on the Hands. (Op. an den Händen und deren Vorbereitung.) K. Vogel.
76 *Alcohol in Obstetrics and Gynecology. (Alk. in der Geb. und Gynäkologie.) A. Theilhaber.
77 Nervous Eructation. (Nervöses Aufstossen.) R. Adler.

70. **Influencing the Heart Action by Pressure on Painful Points.**—Rumpf gives directions for applying this means of diagnosis to exclude simulation. He has found it very valuable in differentiating certain cases of general neurosis accompanied by neuralgia or local pain and tenderness. Excitation of the painful point causes temporary acceleration of the pulse or first slowing and then acceleration of the pulse, a weaker, sometimes irregular pulse rate, dropping of a few waves in the radial artery, cyanosis of the face and, occasionally, a rise or fall in the blood pressure. On cessation of the excitation these symptoms soon subside, the changes in the blood pressure being the last to right themselves. In some cases he observed also profuse local sweating in the axilla, brow and hands. These findings require a special excitability on the part of the nervous system or heart to produce them. In one of the typical cases described, a healthy man was injured in a railroad accident and complained of pain in the back of the head, sensitiveness to noises, forgetfulness and irritability, impairing his earning capacity. As the painful point in the occipital region was rubbed the pulse became small, the face pale and cyanotic and sweat poured out of the axilla and hands. The pulse increased from 100 to 136. Rubbing other points failed to induce any of the above symptoms, and the course of the case confirmed their positive interpretation. Rumpf writes the article to call attention to the technic of the examination. Disregard of any of the points completely invalidates the results. The examination must be done with the patient in bed, where he has lain quietly for some time. If the heart action is previously irregular the findings are unreliable. The patient must breathe quietly and regularly during the entire test. A single test is not so reliable as when the findings of several repetitions are compared. It is important, further, to apply the test to the corresponding sound side or region for comparison. In another case described, rubbing the most painful spot on the right side, after a railroad accident affecting this side, sent the pulse from 88 to 144, proving to his satisfaction that the severe neuralgia of the right lumbar and pelvic region observed was the result of the trauma.

71 and 72. **Report of One Thousand Childbirths Under Scopolamin-Morphin Anesthesia.**—Gauss writes from Krönig's gynecologic clinic at Freiburg to praise the scopolamin-morphin "twilight sleep" in obstetrics. The mortality of the children has fallen 3 per cent. since this technic has been adopted; the average amount of blood lost by the mothers in 363 cases was 277.7 gm., a low physiologic average. Any deviation from the technic he has described—based on the patient's power of perception at the time—upsets all the conclusions in regard to the method. It stands or falls with this technic, and he disclaims all responsibility where it is not scrupulously followed. It requires great attention and close supervision of the patient. The special features of the technic and the dosage were given on page 912. A card is filled out for each patient, recording the subjective symptoms (fatigue, thirst, pains in sacrum, abdomen, perineum), and the objective symptoms (sleep during labor pains or during intervals, twitching of the hands, color of the face, influencing of the pain and consciousness). The details of the childbirth are also recorded and the frequency, length and energy of the straining pains. Also the details in regard to heart sounds, pulse, respiration and temperature. He calls this record the "scopolamin curve," and states that accumulating testimony is all in favor of this method of inducing painless delivery. Preller relates his experiences with Gauss' technic in 120 cases; they were very favorable, but he recognizes a number of contraindications beyond those which Gauss accepts.

73. **Spinal Anesthesia in Combination with Scopolamin-Morphin for Gynecologic and Abdominal Operations.**—Penkert writes from the same clinic to commend the scopolamin-morphin technic as a valuable preliminary to spinal anesthesia. He asserts that it relaxes the abdominal walls and excludes all perception of what is going on, while the analgesia is complete—thus affording ideal conditions for laparotomies. The technic used differs a little from Bier's; larger doses of the spinal anesthetic are used, but the pelvis is never raised. He found the by-effects of the anesthetic much less than with other technics. The method is now currently employed for all abdominal and gynecologic operations in the clinic, where it is regarded as the most humane technic known to date.

74. **Operative Treatment of Menacing Gastric Hemorrhage.**—Hirschel reviews the experience of others in this line and reports a case in which a man of 29 had presented hematemesis twice on one day and twice five days later. The loss of blood was excessive the last time, and the patient was pulseless and only half conscious when first seen by a physician, who ordered

the man's removal to a hospital. At operation, which was performed at once, nothing abnormal was discovered in the outer aspect of the stomach, but an incision in the lesser curvature showed an ulcer, as large as a penny, with an opening into a small artery. A portion of the stomach wall, about the size of a silver dollar, was resected and the wall then sutured. Symptoms of retention later required a secondary gastroenterostomy, since which the patient has been in good health. Hirschel declares that the large percentage of cancers that develop on the basis of an ulcer should turn the scale in favor of resection in doubtful cases.

75. Preparation for Operations on the Hands.—THE JOURNAL has already mentioned Vogel's statements in regard to the great benefit of preliminary application of superheated air in disinfection of the hands. By the intense sweating induced, germs are dislodged from the depths and swept outward so that a nearer approach to asepsis is possible than with any other technic. He here describes experiences with this method as a preliminary measure before operations on the hands, especially on the horny hands of toil. The hand is placed in a hot-air apparatus for an hour morning and night for two or three days before the operation, otherwise the patient uses it as usual. In every instance the operations thereafter on the skin and tendons were followed by primary healing. In his wide experience with industrial accidents to the hand he has found it wiser to sacrifice one of the fingers so as to use it to patch up the others and to restore their function rather than to keep all the fingers with more or less impairment of function.

76. Alcohol in Obstetrics and Gynecology.—Theilhaber quotes from the Iliad to show that the opposite views regarding alcohol as a tonic or as a depressant have come down to us from prehistoric days. He calls attention to the influence of alcohol in inducing hyperemia in the genital organs, which contraindicates its use in all gynecologic affections with a tendency to hemorrhage or excessive secretion and in inflammation, especially of gonorrheal origin. It is also contraindicated in the menopause for the same reasons. He expresses surprise that physicians in general have held back from taking a decided stand in regard to alcoholism, although they are the leaders in the campaign against other scourges; cholera and typhoid fever, he asserts, are far from being as deadly as alcohol in the long run.

Hygiea, Stockholm.

Last indexed, page 914.

78 (LXVIII, No. 12, Pp. 1217-1360.) *Etiology of Sympathetic Ophthalmia. (Simpatiska ögoninflammationens etiologie.) J. Widmark.

79 *Treatment of Migraine with Hypnosis. (Behandlingen af migrän medelst hypnos.) E. af Geijerstam.

80 Manifestations of the Mental Condition from the Standpoint of the Prison Doctor. (Sinnesbeskaffenhetsutlåtanden från fängelsläkarsynpunkt.) T. Petrén.

81 Spontaneous Delivery After Operative Slitting of the Cervix Uteri in a Preceding Pregnancy. (Spontan förlossning efter föregående operativ klyfning af cervix uteri.) E. Essen-Möller.

82 (LXIX, No. 1, Pp. 1-112.) Application of Physical Chemistry to the Doctrine of Immunity. (Fysikaliska kemiens användning inom immunitetsläran.) S. Arrhenius.

83 Blindness in the Scandinavian Countries and Finland in 1900. (Förekomsten af blindhet.) J. Widmark.

84 Bacteriology of Air and Soil in Antarctic Regions. (Svenska Sydpolarexpeditionen 1901-1904.) E. Ekelöf.

85 Perforation of Gastric Ulcer and 4 Cases of Perforation from Ulcer or Cancer. (Ventrikelperforation.) O. Lundblad.

86 Technic of Gastroenterostomy. (Til gastroenterostomiens teknik.) A. Reuterskiöld.

78. Sympathetic Ophthalmia in Sweden.—Widmark's tables show that the percentage of cases of blindness after sympathetic ophthalmia in Sweden is far larger than in the other countries of Europe, reaching 18 per cent. of the total number of cases in 1905, while the proportion in other countries during the last few years was less than 6 per cent. He ascribes this mainly to the way in which the population is scattered over large areas, making it difficult for the patients to seek medical help in time. In his experience with 10 cases of sympathetic iridocyclitis since 1896, treatment with large doses of sodium salicylate proved successful in 80 per cent. Eight of the patients recovered with good and in some cases exceptionally good vision. He ascribes sympathetic ophthalmia to bacterial invasion.

79. Hypnosis in Treatment of Migraine.—Geijerstam reports 15 cases of rebellious migraine in which a cure was realized with systematic application of hypnosis. In 3 other patients no benefit was apparent. The intensity and frequency of the attacks were reduced, without interfering with the patient's usual occupations and daily routine. In 3 of the improved cases the diagnosis of migraine on a rheumatic basis was probable, but improvement was as marked in these cases as in the rest. In the first case a woman of 32 had suffered since childhood from migraine, lasting about 36 hours and recurring at irregular intervals. There were no signs of hysteria and examination by an ophthalmologist and rhinologist was negative. After a month of bromids, galvanism and massage, none of which gave relief, he commenced to apply hypnosis and gave 7 daily sittings, followed by the same number again after a two weeks' interval. The patient was extremely hard to hypnotize, and after numerous attempts he succeeded only in inducing numbness over the entire body, and was tempted to suspend treatment, but then improvement became apparent and the patient has been entirely free from the migraine during the two years since. Other patients have been cured for five years or more. All his patients, with one exception, were women. Hysteria could not be positively excluded in some of the cases.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interest of our readers.

HYGIENIC LABORATORY BULLETIN No. 26. M. J. Rosenau, Director. Stability of the Oxidases and Their Conduct Toward Various Reagents, Conduct of Phenolphthalein in the Animal Organism, Test for Saccharin, and a Simple Method of Distinguishing Between Cumarin and Vanillin, Toxicity of Ozone and Other Oxidizing Agents to Lipase, Influence of Chemical Constitution on the Lipolytic Hydrolysis of Ethereal Salts. By J. H. Kastle. Paper. Pp. 51. Washington: Government Printing Office, 1906.

MANUAL OF PRESCRIPTION WRITING, with a Full Explanation of the Methods of Correctly Writing Prescriptions. By Matthew D. Mann, A.M., M.D., Professor of Obstetrics and Gynecology in the Medical Department of the University of Buffalo. Revised by E. Cox Mann, M.D. Sixth Edition, Revised and Enlarged. Cloth. Pp. 232. Price, $1.00. New York and London: G. P. Putnam's Sons, 1907.

PATHOLOGY AND DIFFERENTIAL DIAGNOSIS OF INFECTIOUS DISEASES OF ANIMALS. By Veranus Alva Moore, B.S., M.D., Professor of Comparative Pathology, New York State Veterinary College, Ithaca, N. Y. With an Introduction by Daniel Elmer Salmon, D.V.M. Second Edition Revised and Enlarged. Illustrated. Cloth. Pp. 506. Price, $4.00 net. Ithaca: Taylor & Carpenter, 1906.

DISEASES OF THE NOSE AND THROAT. By J. Bruce Ferguson, M.D., Instructor in Diseases of the Nose and Throat in the Postgraduate Medical School, New York. Series Edited by Victor Cox Pedersen, A.M., M.D., Lecturer in Surgery at the New York Polyclinic Medical School and Hospital. Cloth. Pp. 243. Price, $1.00 net. Philadelphia: Lea Bros. & Co., 1906.

ANATOMICAL TERMINOLOGY, with Special Reference to the Basle Anatomical Nomenclature. By Lewellys F. Barker, M.D., Professor of Medicine, Johns Hopkins University, Baltimore. With Vocabularies in Latin and English and Illustrations. Cloth. Pp. 103. Price, $1.00 net. Philadelphia: P. Blakiston's Son & Co., 1907.

BLOOD SERUM THERAPY, Preventive Inoculation and Toxin and Serum Diagnosis, for Veterinary Practitioners and Students. By Walter Jowett, F.R.C.V.S., D.V.H., Formerly Demonstrator of Comparative Pathology in the University of Liverpool. Cloth. Pp. 204. Price, $1.75 net. Chicago: W. T. Keener & Co., 1907.

MODERN SURGERY, GENERAL AND OPERATIVE. By John Chalmers Da Costa, M.D., Professor of the Principles of Surgery, Jefferson Medical College, Philadelphia. Fifth Edition. Revised and Enlarged. 872 Illustrations. Cloth. Pp. 1283. Price, $5.50 net. Philadelphia: W. B. Saunders Company, 1907.

MAKERS OF MODERN MEDICINE. By James J. Walsh, M.D., Ph.D., LL.D., Professor of the History of Medicine and Nervous Diseases, Fordham University Medical School. Cloth. Pp. 362. New York: Fordham University Press, 1907.

HISTORY OF THE ECLECTIC MEDICAL INSTITUTE, Cincinnati, Ohio, 1845-1902. Biographical Sketches of Members of the Various Faculties and Graduates. By Harvey Wickes Felter, M.D. Cloth. Pp. 203. Cincinnati, 1902.

REPORTS OF THE TRUSTEES AND SUPERINTENDENT of the Butler Hospital. Presented to the Corporation at its Sixty-third Annual Meeting, Jan. 23, 1907. Paper. Pp. 49. Providence.

VERHANDLUNGEN DER BERLINER MEDIZINISCHEN GESELLSCHAFT, aus dem Gesellschaftsjahre, 1906. Band XXXVII. Paper. Pp. 453. Berlin: Druck von L. Schumacher, 1907.

REPORT OF THE SUPERINTENDENT OF PUBLIC INSTRUCTION. Being the Fifty-fourth Report on the Public Schools of New Hampshire. Cloth. Pp. 498. Concord, 1906.